

Atlántida, Honduras

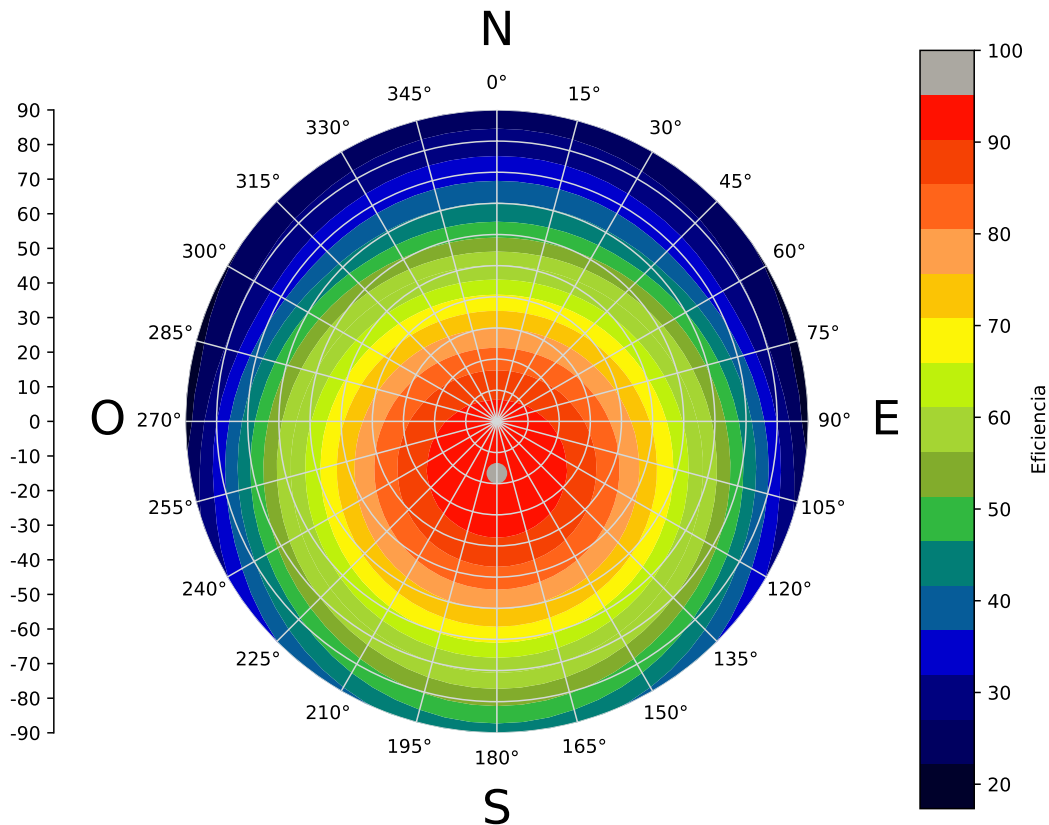
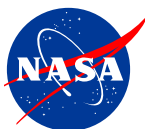


Tabla 1: Generalidades

Latitud	15.783632
Longitud	-86.791673
Modelo de declinación solar	Modelo de Cooper (1961)
Modelo de radiación promedio en superficies inclinadas	Modelo de Klein - Theilacker



Los datos fueron obtenidos de la National Aeronautics and Space Administration (NASA) Langley Research Center (LaRC) Prediction of Worldwide Energy Resource (POWER), Proyecto financiado a través del Programa de Ciencia/Tecnología Aplicada de la NASA.



Tabla 2: Promedios mensuales y anuales de irradiancia de onda corta (Γ), irradiancia UVA (β), índice de claridad de insolación del cielo (α), albedo (ρ), ángulo de declinación solar (δ) y ángulo de puesta del sol (θ).

	Γ	β	α	ρ	δ	θ
Enero	4.7731	11.5877	0.5257	0.1117	-20.8472	83.8151
Febrero	5.0218	11.1332	0.5144	0.0952	-13.3253	86.1521
Marzo	5.4855	9.6633	0.539	0.1104	-2.3892	89.3215
Abril	5.7757	9.7512	0.5472	0.1147	9.4932	92.718
Mayo	5.5116	9.4884	0.5331	0.1087	18.8058	95.5324
Junio	5.4125	9.6167	0.5224	0.1114	23.0771	96.9175
Julio	5.4284	9.6782	0.5272	0.1121	21.1015	96.2673
Agosto	5.4988	9.8369	0.5369	0.1178	13.296	93.8411
Septiembre	5.3831	9.7514	0.546	0.1268	1.9936	90.5659
Octubre	4.9511	9.6117	0.5124	0.1009	-9.8485	87.1777
Noviembre	4.2097	7.9518	0.4822	0.0993	-19.0505	84.3907
Diciembre	4.0502	7.8192	0.4878	0.1033	-23.0956	83.0763
Promedio	5.0545	9.0939	0.5245	0.1031	—	89.9813

Tabla 3: Azimut de 0°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.007	0.9908	0.9733	0.9549	0.943	0.9373	0.9402	0.9454	0.9621	0.9857	1.0013	1.0094	0.9709
10	1.0165	0.9847	0.9489	0.9119	0.8886	0.8778	0.8834	0.893	0.9258	0.9741	1.0054	1.0215	0.9443
15	1.0195	0.9728	0.9185	0.8632	0.8288	0.8129	0.8211	0.8347	0.8833	0.9568	1.0033	1.0273	0.9119
20	1.016	0.9552	0.8825	0.8091	0.7639	0.7432	0.7539	0.7711	0.8348	0.9337	0.9952	1.0269	0.8738
25	1.006	0.9321	0.841	0.75	0.6946	0.6691	0.6824	0.7025	0.7808	0.905	0.9809	1.0201	0.8304
30	0.9896	0.9036	0.7944	0.6865	0.6212	0.5913	0.607	0.6296	0.7215	0.8711	0.9607	1.0071	0.782
35	0.9669	0.87	0.743	0.619	0.5445	0.5104	0.5283	0.5528	0.6576	0.832	0.9347	0.988	0.7289
40	0.9381	0.8314	0.6873	0.5479	0.4649	0.427	0.447	0.4728	0.5894	0.7882	0.9031	0.9629	0.6717
45	0.9033	0.7883	0.6276	0.474	0.3832	0.3417	0.3637	0.3902	0.5175	0.74	0.8661	0.932	0.6106
50	0.863	0.7409	0.5644	0.3976	0.2998	0.2553	0.2791	0.3056	0.4424	0.6877	0.824	0.8956	0.5463
55	0.8173	0.6896	0.4982	0.3195	0.2157	0.2092	0.21	0.2198	0.3647	0.6317	0.7771	0.8538	0.4839
60	0.7666	0.6348	0.4294	0.2403	0.1991	0.2046	0.2054	0.1334	0.285	0.5725	0.7259	0.8071	0.4337
65	0.7113	0.5769	0.3587	0.1778	0.1944	0.1998	0.2006	0.1282	0.2039	0.5105	0.6706	0.7557	0.3907
70	0.6518	0.5163	0.2866	0.1743	0.1896	0.1948	0.1956	0.1276	0.1221	0.4462	0.6117	0.7001	0.3514
75	0.5887	0.4535	0.2135	0.1706	0.1845	0.1896	0.1904	0.127	0.0939	0.38	0.5497	0.6407	0.3152
80	0.5222	0.389	0.1781	0.1668	0.1794	0.1843	0.1851	0.1264	0.0961	0.3125	0.485	0.578	0.2836
85	0.4531	0.3233	0.1731	0.163	0.1742	0.1789	0.1797	0.1257	0.0984	0.2145	0.4181	0.5124	0.2512
90	0.3817	0.2272	0.168	0.1591	0.169	0.1735	0.1743	0.1251	0.1007	0.2054	0.3496	0.4444	0.2232



Tabla 4: Azimut de 5°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.007	0.9908	0.9733	0.955	0.9431	0.9375	0.9404	0.9456	0.9622	0.9857	1.0012	1.0093	0.9709
10	1.0164	0.9847	0.949	0.9121	0.8889	0.8782	0.8837	0.8933	0.926	0.9742	1.0053	1.0213	0.9444
15	1.0193	0.9728	0.9187	0.8635	0.8293	0.8135	0.8216	0.8352	0.8836	0.9568	1.0032	1.0271	0.9121
20	1.0158	0.9552	0.8827	0.8096	0.7646	0.7439	0.7546	0.7717	0.8353	0.9337	0.995	1.0265	0.874
25	1.0057	0.932	0.8413	0.7507	0.6954	0.6701	0.6833	0.7033	0.7813	0.9051	0.9807	1.0197	0.8307
30	0.9892	0.9035	0.7947	0.6873	0.6222	0.5925	0.608	0.6305	0.7221	0.8711	0.9604	1.0067	0.7824
35	0.9664	0.8699	0.7434	0.6198	0.5456	0.5117	0.5295	0.5539	0.6583	0.8321	0.9344	0.9875	0.7294
40	0.9375	0.8314	0.6877	0.5489	0.4662	0.4284	0.4484	0.4741	0.5902	0.7883	0.9027	0.9623	0.6722
45	0.9027	0.7882	0.6281	0.4751	0.3846	0.3433	0.3652	0.3916	0.5184	0.7401	0.8657	0.9314	0.6112
50	0.8623	0.7408	0.5649	0.3988	0.3014	0.257	0.2807	0.3072	0.4434	0.6878	0.8235	0.8948	0.5469
55	0.8166	0.6895	0.4987	0.3208	0.2173	0.2092	0.21	0.2214	0.3658	0.6318	0.7767	0.853	0.4842
60	0.7659	0.6347	0.43	0.2416	0.1991	0.2046	0.2054	0.135	0.2862	0.5726	0.7254	0.8063	0.4339
65	0.7105	0.5768	0.3593	0.1778	0.1944	0.1998	0.2006	0.1282	0.2053	0.5106	0.6701	0.7549	0.3907
70	0.6511	0.5162	0.2872	0.1743	0.1896	0.1948	0.1956	0.1276	0.1237	0.4463	0.6112	0.6993	0.3514
75	0.5879	0.4534	0.2142	0.1706	0.1845	0.1896	0.1904	0.127	0.0943	0.3801	0.5492	0.6399	0.3151
80	0.5214	0.3889	0.1781	0.1668	0.1794	0.1843	0.1851	0.1264	0.0964	0.3126	0.4844	0.5771	0.2834
85	0.4523	0.3232	0.1731	0.163	0.1742	0.1789	0.1797	0.1257	0.0986	0.2145	0.4176	0.5115	0.251
90	0.3809	0.2272	0.168	0.1591	0.169	0.1735	0.1743	0.1251	0.1008	0.2054	0.349	0.4435	0.223

Tabla 5: Azimut de 10°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0067	0.9908	0.9735	0.9554	0.9437	0.9381	0.941	0.9461	0.9625	0.9857	1.0011	1.009	0.9711
10	1.016	0.9846	0.9493	0.9129	0.89	0.8793	0.8848	0.8943	0.9266	0.9742	1.005	1.0208	0.9448
15	1.0187	0.9727	0.9192	0.8647	0.8308	0.8152	0.8233	0.8367	0.8845	0.9569	1.0027	1.0263	0.9126
20	1.0149	0.9551	0.8834	0.8111	0.7667	0.7462	0.7568	0.7737	0.8365	0.9338	0.9944	1.0256	0.8748
25	1.0046	0.9319	0.8421	0.7526	0.698	0.6729	0.6859	0.7057	0.7828	0.9052	0.9799	1.0186	0.8317
30	0.988	0.9034	0.7957	0.6895	0.6253	0.5958	0.6112	0.6334	0.7239	0.8713	0.9596	1.0053	0.7835
35	0.965	0.8697	0.7445	0.6225	0.5491	0.5156	0.5332	0.5572	0.6604	0.8323	0.9334	0.9859	0.7307
40	0.9359	0.8312	0.689	0.5519	0.4701	0.4328	0.4525	0.4778	0.5926	0.7885	0.9016	0.9606	0.6737
45	0.901	0.788	0.6294	0.4784	0.3889	0.3481	0.3698	0.3957	0.521	0.7403	0.8644	0.9294	0.6129
50	0.8604	0.7406	0.5664	0.4024	0.3061	0.2622	0.2856	0.3117	0.4463	0.6881	0.8222	0.8927	0.5487
55	0.8145	0.6893	0.5003	0.3247	0.2223	0.2092	0.21	0.2262	0.369	0.6321	0.7753	0.8508	0.4853
60	0.7637	0.6344	0.4317	0.2458	0.1991	0.2046	0.2054	0.1401	0.2898	0.5729	0.7239	0.8038	0.4346
65	0.7083	0.5765	0.3611	0.1778	0.1944	0.1998	0.2006	0.1282	0.2091	0.5109	0.6685	0.7523	0.3906
70	0.6487	0.5159	0.2891	0.1743	0.1896	0.1948	0.1956	0.1276	0.1276	0.4466	0.6096	0.6966	0.3513
75	0.5855	0.4531	0.2162	0.1706	0.1845	0.1896	0.1904	0.127	0.095	0.3805	0.5475	0.6372	0.3147
80	0.519	0.3886	0.1783	0.1668	0.1794	0.1843	0.1851	0.1264	0.0971	0.313	0.4827	0.5744	0.2829
85	0.4498	0.3228	0.1732	0.163	0.1742	0.1789	0.1797	0.1257	0.0992	0.2145	0.4158	0.5087	0.2505
90	0.3784	0.2272	0.168	0.1591	0.169	0.1735	0.1743	0.1251	0.1014	0.2054	0.3473	0.4407	0.2225



Tabla 6: Azimut de 15°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0064	0.9907	0.9738	0.9561	0.9445	0.9391	0.9419	0.9469	0.963	0.9857	1.0008	1.0086	0.9715
10	1.0152	0.9845	0.9499	0.9142	0.8917	0.8812	0.8866	0.8959	0.9276	0.9743	1.0045	1.02	0.9455
15	1.0176	0.9725	0.9201	0.8666	0.8334	0.8181	0.826	0.8391	0.886	0.957	1.002	1.0252	0.9136
20	1.0135	0.9549	0.8845	0.8137	0.7701	0.75	0.7604	0.7769	0.8385	0.934	0.9934	1.024	0.8761
25	1.0029	0.9317	0.8435	0.7557	0.7022	0.6776	0.6904	0.7097	0.7853	0.9055	0.9787	1.0166	0.8333
30	0.9859	0.9031	0.7974	0.6933	0.6303	0.6014	0.6165	0.6382	0.7269	0.8716	0.9581	1.003	0.7855
35	0.9626	0.8694	0.7464	0.6268	0.5549	0.522	0.5393	0.5627	0.6638	0.8326	0.9317	0.9833	0.733
40	0.9333	0.8308	0.6911	0.5568	0.4766	0.44	0.4593	0.484	0.5965	0.7889	0.8997	0.9576	0.6762
45	0.8981	0.7876	0.6318	0.4838	0.396	0.356	0.3773	0.4026	0.5254	0.7407	0.8624	0.9261	0.6157
50	0.8572	0.7402	0.5689	0.4084	0.3138	0.2707	0.2938	0.3191	0.4511	0.6885	0.82	0.8892	0.5517
55	0.8111	0.6888	0.503	0.3311	0.2305	0.2092	0.21	0.2342	0.3743	0.6326	0.7729	0.847	0.4871
60	0.7601	0.6339	0.4346	0.2526	0.1991	0.2046	0.2054	0.1486	0.2954	0.5734	0.7214	0.7999	0.4357
65	0.7045	0.576	0.3641	0.1778	0.1944	0.1998	0.2006	0.1282	0.215	0.5114	0.6659	0.7482	0.3905
70	0.6448	0.5154	0.2923	0.1743	0.1896	0.1948	0.1956	0.1276	0.1337	0.4471	0.6069	0.6923	0.3512
75	0.5815	0.4525	0.2195	0.1706	0.1845	0.1896	0.1904	0.127	0.0957	0.381	0.5447	0.6327	0.3141
80	0.5149	0.388	0.1784	0.1668	0.1794	0.1843	0.1851	0.1264	0.0978	0.3135	0.4799	0.5698	0.282
85	0.4457	0.3223	0.1733	0.163	0.1742	0.1789	0.1797	0.1257	0.1	0.2145	0.413	0.5041	0.2495
90	0.3743	0.2272	0.1682	0.1591	0.169	0.1735	0.1743	0.1251	0.1021	0.2054	0.3444	0.4361	0.2215

Tabla 7: Azimut de 20°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0059	0.9907	0.9742	0.9569	0.9457	0.9404	0.9431	0.948	0.9637	0.9858	1.0005	1.0081	0.9719
10	1.0142	0.9844	0.9507	0.916	0.8941	0.8839	0.8891	0.8982	0.929	0.9744	1.0038	1.0189	0.9464
15	1.0161	0.9723	0.9213	0.8693	0.8369	0.822	0.8297	0.8425	0.8881	0.9572	1.001	1.0235	0.915
20	1.0115	0.9546	0.8861	0.8172	0.7748	0.7552	0.7654	0.7814	0.8412	0.9343	0.992	1.0218	0.878
25	1.0005	0.9313	0.8454	0.7601	0.708	0.6841	0.6966	0.7153	0.7888	0.9058	0.977	1.0139	0.8356
30	0.983	0.9027	0.7996	0.6985	0.6372	0.6091	0.6238	0.6448	0.7311	0.872	0.9561	0.9998	0.7881
35	0.9593	0.8689	0.749	0.6328	0.5629	0.5308	0.5477	0.5703	0.6686	0.8331	0.9294	0.9796	0.736
40	0.9296	0.8303	0.694	0.5636	0.4856	0.4499	0.4688	0.4926	0.6019	0.7894	0.8972	0.9535	0.6797
45	0.894	0.7871	0.635	0.4913	0.4059	0.367	0.3877	0.412	0.5314	0.7413	0.8596	0.9216	0.6195
50	0.8528	0.7396	0.5724	0.4166	0.3246	0.2826	0.3051	0.3294	0.4577	0.6891	0.817	0.8843	0.5559
55	0.8064	0.6882	0.5067	0.3399	0.242	0.2092	0.2214	0.2453	0.3814	0.6332	0.7696	0.8417	0.4904
60	0.7551	0.6333	0.4385	0.2619	0.1991	0.2046	0.2054	0.1603	0.3028	0.5741	0.718	0.7943	0.4373
65	0.6993	0.5753	0.3684	0.1831	0.1944	0.1998	0.2006	0.1282	0.2228	0.5121	0.6623	0.7424	0.3907
70	0.6394	0.5146	0.2967	0.1743	0.1896	0.1948	0.1956	0.1276	0.1417	0.4479	0.6031	0.6863	0.351
75	0.5759	0.4518	0.224	0.1706	0.1845	0.1896	0.1904	0.127	0.0939	0.3817	0.5409	0.6265	0.3131
80	0.5092	0.3872	0.1785	0.1668	0.1794	0.1843	0.1851	0.1264	0.0986	0.3143	0.476	0.5635	0.2808
85	0.4399	0.3215	0.1735	0.163	0.1742	0.1789	0.1797	0.1257	0.1007	0.2145	0.409	0.4978	0.2482
90	0.3685	0.2272	0.1683	0.1591	0.169	0.1735	0.1743	0.1251	0.1028	0.2054	0.3404	0.4297	0.2203



Tabla 8: Azimut de 25°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0052	0.9906	0.9747	0.9581	0.9472	0.9421	0.9447	0.9494	0.9646	0.9859	1.0001	1.0074	0.9725
10	1.013	0.9842	0.9517	0.9182	0.8971	0.8873	0.8923	0.901	0.9308	0.9746	1.0029	1.0175	0.9476
15	1.0142	0.9721	0.9228	0.8727	0.8415	0.8271	0.8345	0.8468	0.8908	0.9575	0.9997	1.0214	0.9167
20	1.009	0.9543	0.8881	0.8217	0.7808	0.7619	0.7717	0.7871	0.8448	0.9346	0.9903	1.019	0.8803
25	0.9974	0.9309	0.8479	0.7657	0.7154	0.6924	0.7044	0.7224	0.7932	0.9062	0.9749	1.0105	0.8384
30	0.9794	0.9022	0.8025	0.7051	0.646	0.6189	0.6331	0.6531	0.7363	0.8725	0.9536	0.9957	0.7915
35	0.9551	0.8684	0.7524	0.6405	0.573	0.5421	0.5584	0.58	0.6747	0.8336	0.9265	0.9749	0.74
40	0.9249	0.8297	0.6977	0.5722	0.497	0.4626	0.4808	0.5034	0.6088	0.79	0.8939	0.9482	0.6841
45	0.8888	0.7864	0.6391	0.5008	0.4185	0.3809	0.401	0.424	0.539	0.742	0.856	0.9159	0.6244
50	0.8472	0.7388	0.5768	0.4269	0.3382	0.2977	0.3194	0.3425	0.466	0.6899	0.8131	0.878	0.5612
55	0.8004	0.6874	0.5115	0.351	0.2566	0.2136	0.2368	0.2593	0.3902	0.634	0.7655	0.8351	0.4951
60	0.7488	0.6324	0.4437	0.2737	0.1991	0.2046	0.2054	0.1751	0.3122	0.5749	0.7136	0.7873	0.4392
65	0.6927	0.5744	0.3737	0.1955	0.1944	0.1998	0.2006	0.1282	0.2325	0.513	0.6577	0.735	0.3915
70	0.6326	0.5137	0.3022	0.1743	0.1896	0.1948	0.1956	0.1276	0.1518	0.4488	0.5984	0.6787	0.3507
75	0.5688	0.4508	0.2297	0.1706	0.1845	0.1896	0.1904	0.127	0.0939	0.3827	0.536	0.6187	0.3119
80	0.502	0.3863	0.1786	0.1671	0.1794	0.1843	0.1851	0.1264	0.0993	0.3153	0.471	0.5555	0.2792
85	0.4327	0.3205	0.1736	0.1631	0.1742	0.1789	0.1797	0.1257	0.1014	0.2145	0.404	0.4897	0.2465
90	0.3612	0.2272	0.1684	0.1591	0.169	0.1735	0.1743	0.1251	0.1035	0.2054	0.3353	0.4216	0.2186

Tabla 9: Azimut de 30°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0045	0.9905	0.9753	0.9594	0.9491	0.9441	0.9467	0.9512	0.9656	0.986	0.9995	1.0065	0.9732
10	1.0114	0.984	0.9529	0.921	0.9008	0.8914	0.8962	0.9045	0.9329	0.9748	1.0019	1.0158	0.949
15	1.012	0.9718	0.9246	0.8767	0.8469	0.8332	0.8403	0.852	0.894	0.9578	0.9981	1.0188	0.9188
20	1.006	0.9538	0.8905	0.8271	0.788	0.77	0.7794	0.7939	0.849	0.935	0.9882	1.0157	0.8831
25	0.9936	0.9304	0.8508	0.7724	0.7244	0.7024	0.7139	0.7309	0.7984	0.9067	0.9723	1.0063	0.8419
30	0.9749	0.9016	0.806	0.7131	0.6566	0.6307	0.6443	0.6633	0.7426	0.8731	0.9505	0.9908	0.7956
35	0.9501	0.8677	0.7564	0.6497	0.5852	0.5557	0.5713	0.5916	0.682	0.8343	0.923	0.9693	0.7447
40	0.9192	0.8289	0.7022	0.5825	0.5107	0.4779	0.4953	0.5165	0.617	0.7908	0.89	0.9419	0.6894
45	0.8826	0.7855	0.644	0.5122	0.4336	0.3977	0.4169	0.4385	0.5481	0.7428	0.8517	0.9089	0.6302
50	0.8405	0.7379	0.5822	0.4393	0.3546	0.3159	0.3367	0.3581	0.4758	0.6908	0.8084	0.8705	0.5676
55	0.7932	0.6864	0.5173	0.3643	0.2742	0.233	0.2553	0.276	0.4007	0.635	0.7605	0.827	0.5019
60	0.7412	0.6314	0.4498	0.2877	0.1991	0.2046	0.2054	0.1928	0.3232	0.576	0.7083	0.7788	0.4415
65	0.6847	0.5733	0.3802	0.2102	0.1944	0.1998	0.2006	0.1282	0.2441	0.5141	0.6522	0.7261	0.3923
70	0.6243	0.5126	0.3089	0.1743	0.1896	0.1948	0.1956	0.1276	0.1638	0.4499	0.5926	0.6694	0.3503
75	0.5603	0.4497	0.2365	0.1706	0.1845	0.1896	0.1904	0.127	0.0939	0.3839	0.5301	0.6092	0.3105
80	0.4934	0.3851	0.1787	0.1679	0.1794	0.1843	0.1851	0.1264	0.0999	0.3164	0.465	0.5458	0.2773
85	0.4239	0.3193	0.1737	0.1639	0.1742	0.1789	0.1797	0.1257	0.1021	0.2145	0.3979	0.4799	0.2445
90	0.3524	0.2272	0.1686	0.1598	0.169	0.1735	0.1743	0.1251	0.1042	0.2054	0.3292	0.4118	0.2167



Tabla 10: Azimut de 35°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0036	0.9904	0.976	0.961	0.9512	0.9465	0.9489	0.9532	0.9669	0.9861	0.9989	1.0055	0.974
10	1.0097	0.9838	0.9543	0.9241	0.905	0.8961	0.9007	0.9085	0.9354	0.9751	1.0006	1.0138	0.9506
15	1.0093	0.9714	0.9267	0.8815	0.8533	0.8402	0.847	0.858	0.8977	0.9582	0.9962	1.0159	0.9213
20	1.0025	0.9534	0.8932	0.8334	0.7964	0.7794	0.7882	0.8019	0.854	0.9355	0.9858	1.0118	0.8863
25	0.9893	0.9298	0.8543	0.7802	0.7348	0.714	0.7249	0.7408	0.8046	0.9073	0.9693	1.0015	0.8459
30	0.9698	0.9009	0.8101	0.7224	0.669	0.6445	0.6574	0.675	0.7499	0.8738	0.947	0.9851	0.8004
35	0.9442	0.8669	0.761	0.6603	0.5994	0.5715	0.5863	0.6051	0.6904	0.8351	0.9189	0.9627	0.7502
40	0.9126	0.828	0.7075	0.5945	0.5266	0.4956	0.5121	0.5317	0.6265	0.7917	0.8854	0.9346	0.6956
45	0.8753	0.7845	0.6498	0.5255	0.4512	0.4173	0.4354	0.4552	0.5586	0.7438	0.8467	0.9008	0.637
50	0.8326	0.7368	0.5884	0.4537	0.3736	0.3371	0.3568	0.3763	0.4871	0.6918	0.803	0.8618	0.5749
55	0.7848	0.6852	0.524	0.3797	0.2945	0.2557	0.2768	0.2954	0.4128	0.6362	0.7547	0.8177	0.5098
60	0.7323	0.6302	0.4569	0.304	0.2144	0.2046	0.2054	0.2133	0.336	0.5772	0.7021	0.7689	0.4454
65	0.6754	0.572	0.3876	0.2272	0.1944	0.1998	0.2006	0.1305	0.2575	0.5154	0.6457	0.7157	0.3935
70	0.6146	0.5113	0.3166	0.1743	0.1896	0.1948	0.1956	0.1276	0.1777	0.4512	0.5859	0.6587	0.3498
75	0.5504	0.4483	0.2445	0.1706	0.1845	0.1896	0.1904	0.127	0.0972	0.3852	0.5232	0.5981	0.3091
80	0.4832	0.3837	0.1788	0.1686	0.1794	0.1843	0.1851	0.1264	0.1005	0.3178	0.458	0.5346	0.275
85	0.4136	0.3179	0.1738	0.1647	0.1742	0.1789	0.1797	0.1257	0.1028	0.2145	0.3908	0.4685	0.2421
90	0.3421	0.2272	0.1687	0.1606	0.169	0.1735	0.1743	0.1251	0.1049	0.2054	0.3221	0.4003	0.2144

Tabla 11: Azimut de 40°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0026	0.9902	0.9768	0.9628	0.9536	0.9492	0.9515	0.9555	0.9683	0.9863	0.9982	1.0044	0.9749
10	1.0076	0.9835	0.9559	0.9277	0.9098	0.9015	0.9058	0.9131	0.9382	0.9753	0.9992	1.0115	0.9524
15	1.0063	0.971	0.9291	0.8869	0.8605	0.8483	0.8546	0.8648	0.9019	0.9586	0.9942	1.0125	0.924
20	0.9985	0.9528	0.8964	0.8405	0.8059	0.79	0.7983	0.8109	0.8596	0.936	0.983	1.0073	0.89
25	0.9844	0.9292	0.8582	0.7891	0.7466	0.7271	0.7373	0.7519	0.8115	0.908	0.9659	0.996	0.8504
30	0.964	0.9001	0.8147	0.7329	0.683	0.6601	0.6721	0.6883	0.7582	0.8746	0.9429	0.9786	0.8058
35	0.9375	0.866	0.7663	0.6724	0.6155	0.5894	0.6032	0.6204	0.6999	0.836	0.9143	0.9553	0.7564
40	0.9051	0.827	0.7134	0.608	0.5447	0.5157	0.5311	0.5488	0.6372	0.7927	0.8802	0.9263	0.7025
45	0.8671	0.7834	0.6563	0.5404	0.471	0.4393	0.4564	0.4741	0.5703	0.7449	0.841	0.8917	0.6447
50	0.8237	0.7356	0.5956	0.4698	0.3951	0.361	0.3795	0.3967	0.4998	0.693	0.7968	0.8518	0.5832
55	0.7753	0.684	0.5317	0.397	0.3175	0.2813	0.301	0.3173	0.4263	0.6374	0.7481	0.807	0.5187
60	0.7222	0.6288	0.465	0.3223	0.2388	0.2046	0.2216	0.2365	0.3504	0.5786	0.6951	0.7576	0.4518
65	0.6649	0.5706	0.3961	0.2463	0.1944	0.1998	0.2006	0.1547	0.2725	0.5168	0.6384	0.704	0.3966
70	0.6037	0.5098	0.3254	0.1743	0.1896	0.1948	0.1956	0.1276	0.1933	0.4527	0.5784	0.6465	0.3493
75	0.5392	0.4468	0.2535	0.1706	0.1845	0.1896	0.1904	0.127	0.1133	0.3867	0.5154	0.5856	0.3086
80	0.4718	0.3822	0.1789	0.1694	0.1794	0.1843	0.1851	0.1265	0.1011	0.3194	0.45	0.5218	0.2725
85	0.4021	0.3164	0.1739	0.1655	0.1742	0.1789	0.1797	0.1257	0.1034	0.2145	0.3827	0.4556	0.2394
90	0.3305	0.2272	0.1688	0.1614	0.169	0.1735	0.1743	0.1251	0.1055	0.2054	0.314	0.3874	0.2118



Tabla 12: Azimut de 45°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0014	0.9901	0.9777	0.9648	0.9563	0.9522	0.9543	0.958	0.9698	0.9864	0.9974	1.0031	0.976
10	1.0054	0.9832	0.9577	0.9317	0.9152	0.9074	0.9114	0.9182	0.9414	0.9756	0.9977	1.0091	0.9545
15	1.0029	0.9705	0.9317	0.8928	0.8685	0.8572	0.863	0.8724	0.9066	0.959	0.9918	1.0088	0.9271
20	0.9941	0.9522	0.8999	0.8484	0.8165	0.8018	0.8095	0.821	0.8658	0.9366	0.98	1.0024	0.894
25	0.9789	0.9284	0.8625	0.7988	0.7597	0.7417	0.7511	0.7643	0.8192	0.9087	0.9621	0.9899	0.8555
30	0.9575	0.8993	0.8198	0.7445	0.6985	0.6773	0.6885	0.703	0.7673	0.8754	0.9385	0.9714	0.8118
35	0.9301	0.865	0.7722	0.6857	0.6333	0.6092	0.622	0.6373	0.7104	0.837	0.9092	0.9471	0.7632
40	0.8968	0.8259	0.72	0.623	0.5646	0.5379	0.5522	0.5678	0.649	0.7939	0.8745	0.917	0.7102
45	0.858	0.7822	0.6635	0.5569	0.493	0.4638	0.4796	0.4949	0.5832	0.7462	0.8346	0.8815	0.6531
50	0.8138	0.7343	0.6035	0.4877	0.4189	0.3875	0.4046	0.4194	0.5138	0.6944	0.7899	0.8408	0.5924
55	0.7647	0.6825	0.5401	0.4161	0.343	0.3097	0.3279	0.3415	0.4413	0.6389	0.7407	0.7953	0.5285
60	0.711	0.6273	0.4739	0.3425	0.2657	0.2307	0.25	0.2621	0.3662	0.5801	0.6874	0.7452	0.4618
65	0.6532	0.569	0.4054	0.2675	0.1944	0.1998	0.2006	0.1815	0.2891	0.5184	0.6303	0.691	0.4
70	0.5916	0.5082	0.3351	0.1916	0.1896	0.1948	0.1956	0.1276	0.2105	0.4544	0.57	0.633	0.3501
75	0.5267	0.4451	0.2634	0.1706	0.1845	0.1896	0.1904	0.127	0.1309	0.3884	0.5068	0.5717	0.3079
80	0.4591	0.3805	0.191	0.1701	0.1794	0.1843	0.1851	0.1276	0.1017	0.3211	0.4412	0.5077	0.2707
85	0.3892	0.3146	0.174	0.1662	0.1742	0.1789	0.1797	0.1268	0.1039	0.2529	0.3738	0.4412	0.2396
90	0.3176	0.2272	0.1689	0.1622	0.169	0.1735	0.1743	0.126	0.1061	0.2054	0.3051	0.373	0.209

Tabla 13: Azimut de 50°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	1.0002	0.9899	0.9787	0.967	0.9592	0.9555	0.9574	0.9608	0.9715	0.9866	0.9966	1.0018	0.9771
10	1.003	0.9829	0.9597	0.9361	0.921	0.914	0.9176	0.9237	0.9448	0.976	0.996	1.0063	0.9567
15	0.9993	0.97	0.9346	0.8993	0.8772	0.8669	0.8722	0.8806	0.9117	0.9595	0.9893	1.0048	0.9305
20	0.9893	0.9516	0.9037	0.857	0.828	0.8146	0.8216	0.8319	0.8725	0.9373	0.9766	0.9971	0.8984
25	0.973	0.9276	0.8672	0.8095	0.7739	0.7576	0.7662	0.7779	0.8276	0.9095	0.958	0.9833	0.8609
30	0.9505	0.8983	0.8254	0.7571	0.7153	0.6962	0.7063	0.719	0.7773	0.8764	0.9336	0.9636	0.8182
35	0.922	0.8639	0.7786	0.7002	0.6527	0.6308	0.6425	0.6557	0.7219	0.8381	0.9036	0.9381	0.7707
40	0.8878	0.8247	0.7271	0.6393	0.5864	0.5621	0.5752	0.5884	0.6617	0.7951	0.8682	0.9069	0.7186
45	0.848	0.7808	0.6715	0.5748	0.5169	0.4905	0.5048	0.5177	0.5973	0.7475	0.8277	0.8704	0.6623
50	0.803	0.7328	0.6121	0.5072	0.4449	0.4164	0.432	0.444	0.5291	0.6959	0.7824	0.8288	0.6024
55	0.7532	0.681	0.5493	0.4369	0.3707	0.3406	0.3572	0.3679	0.4576	0.6405	0.7327	0.7824	0.5392
60	0.6988	0.6257	0.4837	0.3645	0.295	0.2634	0.281	0.2899	0.3834	0.5817	0.6789	0.7316	0.4731
65	0.6404	0.5673	0.4156	0.2905	0.2183	0.1998	0.204	0.2107	0.3071	0.5202	0.6215	0.6767	0.406
70	0.5783	0.5064	0.3456	0.2154	0.1896	0.1948	0.1956	0.1307	0.2291	0.4562	0.5608	0.6183	0.3517
75	0.5131	0.4433	0.2743	0.1706	0.1845	0.1896	0.1904	0.127	0.1501	0.3903	0.4973	0.5566	0.3073
80	0.4452	0.3786	0.2021	0.1708	0.1794	0.1843	0.1851	0.1286	0.1022	0.323	0.4316	0.4922	0.2686
85	0.3752	0.3127	0.1741	0.1669	0.1742	0.1789	0.1797	0.1279	0.1045	0.2548	0.3641	0.4256	0.2366
90	0.3035	0.2272	0.169	0.1629	0.169	0.1735	0.1743	0.127	0.1067	0.2054	0.2953	0.3573	0.2059



Tabla 14: Azimut de 55°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9989	0.9897	0.9797	0.9693	0.9624	0.959	0.9607	0.9637	0.9733	0.9868	0.9957	1.0003	0.9783
10	1.0003	0.9825	0.9617	0.9408	0.9273	0.921	0.9242	0.9296	0.9484	0.9763	0.9942	1.0034	0.9591
15	0.9954	0.9695	0.9377	0.9063	0.8865	0.8773	0.8821	0.8895	0.9171	0.96	0.9866	1.0004	0.934
20	0.9841	0.9509	0.9078	0.8663	0.8404	0.8284	0.8347	0.8436	0.8798	0.938	0.973	0.9913	0.9032
25	0.9666	0.9268	0.8723	0.821	0.7893	0.7747	0.7824	0.7924	0.8366	0.9104	0.9536	0.9762	0.8668
30	0.9429	0.8973	0.8314	0.7707	0.7335	0.7164	0.7255	0.7362	0.7879	0.8774	0.9283	0.9551	0.8252
35	0.9133	0.8627	0.7855	0.7158	0.6735	0.6541	0.6645	0.6754	0.7341	0.8393	0.8976	0.9284	0.7787
40	0.878	0.8233	0.7349	0.6568	0.6097	0.5881	0.5998	0.6105	0.6754	0.7964	0.8615	0.8961	0.7275
45	0.8373	0.7794	0.68	0.594	0.5426	0.5191	0.532	0.542	0.6123	0.749	0.8203	0.8585	0.6722
50	0.7914	0.7313	0.6213	0.528	0.4727	0.4475	0.4614	0.4704	0.5454	0.6974	0.7744	0.8159	0.6131
55	0.7408	0.6793	0.5592	0.4592	0.4005	0.3737	0.3887	0.3961	0.4751	0.6421	0.7241	0.7686	0.5506
60	0.6857	0.6239	0.4941	0.3881	0.3265	0.2985	0.3143	0.3198	0.4019	0.5835	0.6698	0.717	0.4853
65	0.6267	0.5654	0.4266	0.3152	0.2513	0.2222	0.2388	0.2419	0.3264	0.522	0.6119	0.6614	0.4175
70	0.5641	0.5044	0.357	0.241	0.1896	0.1948	0.1956	0.1631	0.2491	0.4581	0.5509	0.6024	0.3558
75	0.4985	0.4413	0.286	0.1706	0.1845	0.1896	0.1904	0.127	0.1707	0.3923	0.4872	0.5403	0.3065
80	0.4303	0.3766	0.214	0.1668	0.1794	0.1843	0.1851	0.1264	0.0961	0.325	0.4213	0.4756	0.2651
85	0.3601	0.3107	0.1741	0.1676	0.1742	0.1789	0.1797	0.1289	0.1049	0.2569	0.3536	0.4088	0.2332
90	0.2883	0.2272	0.1691	0.1636	0.169	0.1735	0.1743	0.1281	0.1072	0.2054	0.2848	0.3404	0.2026

Tabla 15: Azimut de 60°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9975	0.9895	0.9808	0.9718	0.9657	0.9627	0.9643	0.9669	0.9753	0.987	0.9947	0.9987	0.9796
10	0.9975	0.9821	0.964	0.9457	0.934	0.9284	0.9313	0.9359	0.9523	0.9767	0.9922	1.0003	0.9617
15	0.9912	0.969	0.941	0.9137	0.8965	0.8884	0.8926	0.8989	0.9229	0.9606	0.9837	0.9957	0.9379
20	0.9786	0.9501	0.9122	0.8761	0.8536	0.8431	0.8486	0.8561	0.8874	0.9388	0.9692	0.9851	0.9082
25	0.9598	0.9258	0.8777	0.8331	0.8055	0.7928	0.7996	0.8078	0.8461	0.9113	0.9488	0.9686	0.8731
30	0.9349	0.8962	0.8378	0.7851	0.7528	0.7379	0.7459	0.7544	0.7992	0.8785	0.9228	0.9462	0.8326
35	0.9041	0.8615	0.7928	0.7324	0.6956	0.6787	0.6879	0.6964	0.7471	0.8406	0.8912	0.9181	0.7872
40	0.8677	0.8219	0.7431	0.6753	0.6345	0.6158	0.626	0.634	0.6899	0.7978	0.8543	0.8845	0.7371
45	0.8259	0.7779	0.6891	0.6144	0.5699	0.5495	0.5608	0.5679	0.6283	0.7505	0.8124	0.8458	0.6827
50	0.7791	0.7296	0.6312	0.5501	0.5023	0.4804	0.4926	0.4984	0.5627	0.6991	0.7658	0.8021	0.6244
55	0.7276	0.6775	0.5697	0.4828	0.4321	0.409	0.422	0.4261	0.4935	0.6439	0.715	0.7539	0.5628
60	0.6717	0.622	0.5053	0.413	0.3599	0.3357	0.3496	0.3515	0.4214	0.5854	0.6602	0.7014	0.4981
65	0.6121	0.5635	0.4382	0.3413	0.2863	0.2612	0.2757	0.2751	0.3468	0.524	0.6018	0.6452	0.4309
70	0.5489	0.5024	0.369	0.2681	0.2117	0.1948	0.2011	0.1975	0.2703	0.4602	0.5404	0.5855	0.3625
75	0.4829	0.4392	0.2983	0.1941	0.1845	0.1896	0.1904	0.127	0.1925	0.3944	0.4764	0.5229	0.3077
80	0.4144	0.3744	0.2266	0.1668	0.1794	0.1843	0.1851	0.1264	0.1139	0.3272	0.4103	0.4579	0.2639
85	0.344	0.3085	0.1742	0.1682	0.1745	0.1789	0.1797	0.1299	0.1054	0.259	0.3425	0.3909	0.2297
90	0.2722	0.2272	0.1692	0.1643	0.169	0.1735	0.1743	0.1291	0.1076	0.2054	0.2737	0.3225	0.199



Tabla 16: Azimut de 65°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.996	0.9893	0.982	0.9745	0.9692	0.9666	0.968	0.9702	0.9773	0.9872	0.9937	0.9971	0.9809
10	0.9946	0.9817	0.9663	0.951	0.941	0.9362	0.9387	0.9426	0.9564	0.9771	0.9902	0.997	0.9644
15	0.9868	0.9684	0.9445	0.9215	0.9069	0.9001	0.9037	0.9088	0.929	0.9612	0.9807	0.9909	0.9419
20	0.9728	0.9494	0.9168	0.8864	0.8674	0.8585	0.8633	0.8692	0.8955	0.9395	0.9652	0.9787	0.9136
25	0.9526	0.9249	0.8834	0.8459	0.8226	0.8119	0.8177	0.824	0.8561	0.9123	0.9439	0.9606	0.8796
30	0.9264	0.8951	0.8445	0.8002	0.773	0.7604	0.7672	0.7736	0.811	0.8797	0.9169	0.9367	0.8404
35	0.8944	0.8602	0.8005	0.7497	0.7188	0.7046	0.7124	0.7184	0.7606	0.8419	0.8844	0.9073	0.7961
40	0.8568	0.8205	0.7517	0.6948	0.6605	0.6448	0.6535	0.6587	0.7051	0.7993	0.8467	0.8724	0.7471
45	0.8139	0.7762	0.6986	0.6359	0.5985	0.5814	0.591	0.595	0.645	0.7522	0.8041	0.8324	0.6937
50	0.7661	0.7278	0.6415	0.5733	0.5333	0.515	0.5254	0.5278	0.5808	0.7009	0.7568	0.7877	0.6364
55	0.7137	0.6756	0.5808	0.5076	0.4653	0.446	0.4571	0.4575	0.5129	0.6458	0.7053	0.7384	0.5755
60	0.6571	0.62	0.5169	0.4393	0.395	0.3749	0.3866	0.3847	0.4419	0.5874	0.65	0.6851	0.5116
65	0.5967	0.5614	0.4504	0.3688	0.323	0.3022	0.3145	0.3099	0.3682	0.5261	0.5912	0.6281	0.445
70	0.533	0.5002	0.3817	0.2966	0.2498	0.2285	0.2413	0.2336	0.2925	0.4623	0.5294	0.5678	0.3764
75	0.4665	0.437	0.3114	0.2233	0.1845	0.1896	0.1904	0.1564	0.2154	0.3966	0.4651	0.5047	0.3117
80	0.3977	0.3722	0.2399	0.1668	0.1794	0.1843	0.1851	0.1264	0.1372	0.3294	0.3987	0.4393	0.263
85	0.3271	0.3062	0.1743	0.1688	0.1758	0.1789	0.1799	0.1309	0.1057	0.2613	0.3308	0.3721	0.226
90	0.2553	0.2272	0.1692	0.1649	0.1703	0.1735	0.1743	0.1301	0.108	0.2054	0.2619	0.3036	0.1953

Tabla 17: Azimut de 70°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9945	0.9891	0.9832	0.9772	0.9729	0.9707	0.9718	0.9737	0.9795	0.9874	0.9926	0.9954	0.9823
10	0.9915	0.9813	0.9687	0.9564	0.9483	0.9444	0.9464	0.9495	0.9606	0.9775	0.9881	0.9936	0.9672
15	0.9823	0.9677	0.9481	0.9297	0.9178	0.9122	0.9152	0.9191	0.9354	0.9618	0.9775	0.9858	0.946
20	0.9668	0.9485	0.9216	0.8972	0.8818	0.8746	0.8785	0.8828	0.9039	0.9404	0.961	0.972	0.9191
25	0.9451	0.9239	0.8893	0.8592	0.8404	0.8317	0.8365	0.8408	0.8665	0.9133	0.9387	0.9523	0.8865
30	0.9176	0.8939	0.8515	0.8159	0.794	0.7839	0.7895	0.7935	0.8233	0.8809	0.9108	0.9269	0.8485
35	0.8842	0.8588	0.8086	0.7677	0.743	0.7316	0.7379	0.7413	0.7747	0.8433	0.8774	0.896	0.8054
40	0.8454	0.8189	0.7607	0.715	0.6876	0.675	0.6821	0.6843	0.7209	0.8008	0.8389	0.8598	0.7575
45	0.8014	0.7746	0.7085	0.6581	0.6283	0.6147	0.6225	0.6232	0.6623	0.7539	0.7954	0.8185	0.7051
50	0.7526	0.726	0.6522	0.5974	0.5656	0.551	0.5595	0.5584	0.5996	0.7027	0.7475	0.7726	0.6487
55	0.6992	0.6737	0.5923	0.5334	0.4998	0.4845	0.4936	0.4902	0.533	0.6478	0.6953	0.7223	0.5888
60	0.6418	0.6179	0.5291	0.4665	0.4315	0.4155	0.4252	0.4193	0.4631	0.5895	0.6394	0.6681	0.5256
65	0.5807	0.5592	0.4631	0.3973	0.3612	0.3448	0.3549	0.346	0.3905	0.5283	0.5801	0.6103	0.4597
70	0.5164	0.498	0.3949	0.3262	0.2894	0.2726	0.2831	0.2711	0.3156	0.4646	0.5179	0.5493	0.3916
75	0.4495	0.4347	0.3249	0.2538	0.2166	0.1997	0.2105	0.195	0.2391	0.3989	0.4532	0.4857	0.3218
80	0.3803	0.3698	0.2537	0.1806	0.1794	0.1843	0.1851	0.1264	0.1614	0.3318	0.3866	0.42	0.2633
85	0.3095	0.3039	0.1819	0.1694	0.177	0.1795	0.1814	0.1318	0.106	0.2637	0.3186	0.3525	0.2229
90	0.2376	0.2272	0.1693	0.1655	0.1716	0.1738	0.1757	0.131	0.1083	0.2054	0.2497	0.284	0.1916



Tabla 18: Azimut de 75°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9929	0.9889	0.9845	0.98	0.9767	0.9749	0.9758	0.9773	0.9816	0.9876	0.9915	0.9936	0.9838
10	0.9883	0.9809	0.9712	0.962	0.9558	0.9528	0.9544	0.9566	0.965	0.978	0.9859	0.9901	0.9701
15	0.9775	0.9671	0.9519	0.938	0.9291	0.9248	0.9271	0.9297	0.9419	0.9625	0.9742	0.9805	0.9504
20	0.9605	0.9477	0.9265	0.9082	0.8966	0.8912	0.8941	0.8968	0.9125	0.9412	0.9567	0.965	0.9248
25	0.9374	0.9228	0.8954	0.8728	0.8588	0.8522	0.8558	0.8582	0.8771	0.9144	0.9334	0.9437	0.8935
30	0.9085	0.8926	0.8587	0.8321	0.8158	0.8081	0.8124	0.8141	0.8359	0.8821	0.9044	0.9168	0.8568
35	0.8738	0.8574	0.8168	0.7863	0.7679	0.7593	0.7642	0.7648	0.7892	0.8447	0.8702	0.8843	0.8149
40	0.8337	0.8173	0.77	0.7358	0.7155	0.7061	0.7116	0.7108	0.7371	0.8024	0.8307	0.8467	0.7682
45	0.7885	0.7728	0.7187	0.681	0.659	0.6489	0.6549	0.6523	0.6802	0.7556	0.7865	0.8042	0.7169
50	0.7386	0.7241	0.6633	0.6222	0.5988	0.5881	0.5946	0.5899	0.6189	0.7046	0.7378	0.7571	0.6615
55	0.6843	0.6717	0.6041	0.5599	0.5354	0.5241	0.5311	0.5239	0.5537	0.6498	0.685	0.7057	0.6024
60	0.626	0.6158	0.5416	0.4946	0.4691	0.4575	0.4649	0.4549	0.485	0.5916	0.6284	0.6505	0.54
65	0.5642	0.557	0.4762	0.4266	0.4005	0.3887	0.3965	0.3833	0.4134	0.5305	0.5686	0.5919	0.4748
70	0.4993	0.4957	0.4085	0.3566	0.3302	0.3182	0.3263	0.3097	0.3394	0.4669	0.506	0.5302	0.4073
75	0.4319	0.4323	0.3389	0.2851	0.2585	0.2465	0.2549	0.2347	0.2635	0.4013	0.441	0.4661	0.3379
80	0.3624	0.3674	0.268	0.2125	0.1862	0.1843	0.1851	0.1588	0.1864	0.3343	0.3742	0.4	0.2683
85	0.2914	0.3014	0.1963	0.163	0.1742	0.1789	0.1797	0.1257	0.1085	0.2662	0.306	0.3323	0.2186
90	0.2194	0.2272	0.1693	0.166	0.1728	0.1756	0.1772	0.1319	0.1085	0.2054	0.237	0.2637	0.1878

Tabla 19: Azimut de 80°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9913	0.9887	0.9858	0.9829	0.9805	0.9792	0.9799	0.9809	0.9839	0.9878	0.9904	0.9918	0.9853
10	0.9851	0.9804	0.9738	0.9678	0.9635	0.9614	0.9625	0.9639	0.9694	0.9784	0.9836	0.9865	0.973
15	0.9727	0.9665	0.9557	0.9466	0.9405	0.9376	0.9392	0.9406	0.9486	0.9631	0.9709	0.9751	0.9548
20	0.9541	0.9468	0.9316	0.9196	0.9118	0.9081	0.9102	0.9112	0.9214	0.9421	0.9523	0.9579	0.9306
25	0.9296	0.9217	0.9016	0.8868	0.8775	0.8731	0.8757	0.8759	0.888	0.9154	0.9279	0.9349	0.9007
30	0.8991	0.8914	0.8661	0.8487	0.8379	0.8329	0.8359	0.8351	0.8489	0.8834	0.898	0.9064	0.8653
35	0.8631	0.8559	0.8253	0.8053	0.7933	0.7878	0.7912	0.7889	0.804	0.8462	0.8627	0.8724	0.8247
40	0.8217	0.8157	0.7795	0.7571	0.744	0.738	0.7418	0.7378	0.7537	0.8041	0.8224	0.8334	0.7791
45	0.7754	0.771	0.7292	0.7044	0.6904	0.6839	0.6881	0.682	0.6985	0.7574	0.7774	0.7895	0.7289
50	0.7243	0.7222	0.6746	0.6476	0.6328	0.626	0.6306	0.622	0.6387	0.7066	0.7279	0.7412	0.6745
55	0.669	0.6696	0.6162	0.587	0.5717	0.5647	0.5696	0.5583	0.5748	0.6519	0.6744	0.6887	0.6163
60	0.6098	0.6136	0.5544	0.5232	0.5075	0.5004	0.5055	0.4912	0.5074	0.5938	0.6173	0.6325	0.5547
65	0.5473	0.5547	0.4896	0.4567	0.4408	0.4336	0.439	0.4214	0.4368	0.5328	0.5569	0.573	0.4902
70	0.4818	0.4933	0.4224	0.3878	0.3719	0.3647	0.3704	0.3492	0.3636	0.4693	0.4939	0.5107	0.4233
75	0.4139	0.4299	0.3532	0.3171	0.3014	0.2944	0.3002	0.2753	0.2884	0.4038	0.4285	0.4461	0.3544
80	0.344	0.3649	0.2826	0.2451	0.2299	0.2231	0.2291	0.2002	0.2118	0.3367	0.3615	0.3795	0.284
85	0.2728	0.2989	0.211	0.1725	0.1742	0.1789	0.1797	0.1257	0.1343	0.2687	0.2932	0.3116	0.2185
90	0.2008	0.2272	0.1693	0.1664	0.1741	0.1773	0.1787	0.1328	0.1087	0.2054	0.2241	0.2429	0.184



Tabla 20: Azimut de 85°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9896	0.9885	0.9871	0.9858	0.9844	0.9836	0.9841	0.9846	0.9862	0.988	0.9892	0.99	0.9868
10	0.9818	0.98	0.9764	0.9736	0.9713	0.9701	0.9708	0.9713	0.974	0.9789	0.9813	0.9828	0.976
15	0.9678	0.9658	0.9596	0.9553	0.9522	0.9506	0.9515	0.9516	0.9553	0.9638	0.9675	0.9697	0.9592
20	0.9477	0.946	0.9367	0.931	0.9272	0.9253	0.9265	0.9258	0.9303	0.943	0.9478	0.9507	0.9365
25	0.9215	0.9207	0.908	0.901	0.8966	0.8944	0.8958	0.8939	0.8991	0.9165	0.9224	0.926	0.908
30	0.8897	0.8901	0.8736	0.8654	0.8605	0.8581	0.8597	0.8564	0.8619	0.8847	0.8914	0.8958	0.8739
35	0.8522	0.8545	0.8339	0.8246	0.8192	0.8166	0.8185	0.8133	0.819	0.8476	0.8552	0.8603	0.8346
40	0.8096	0.8141	0.7892	0.7787	0.773	0.7703	0.7724	0.7651	0.7705	0.8057	0.814	0.8198	0.7902
45	0.762	0.7692	0.7398	0.7281	0.7222	0.7195	0.7218	0.7121	0.7169	0.7592	0.7681	0.7746	0.7411
50	0.7098	0.7202	0.6861	0.6733	0.6673	0.6645	0.667	0.6546	0.6587	0.7085	0.7178	0.725	0.6878
55	0.6535	0.6675	0.6285	0.6145	0.6086	0.6059	0.6085	0.5932	0.5962	0.654	0.6636	0.6714	0.6305
60	0.5934	0.6114	0.5674	0.5523	0.5465	0.5439	0.5467	0.5281	0.53	0.5961	0.6059	0.6142	0.5697
65	0.5301	0.5524	0.5032	0.4871	0.4816	0.4791	0.4821	0.46	0.4605	0.5351	0.545	0.5539	0.5058
70	0.464	0.4909	0.4365	0.4193	0.4142	0.412	0.4151	0.3892	0.3882	0.4717	0.4815	0.4909	0.4395
75	0.3956	0.4274	0.3677	0.3495	0.3449	0.343	0.3462	0.3165	0.3137	0.4063	0.4159	0.4257	0.371
80	0.3254	0.3624	0.2974	0.2782	0.2743	0.2726	0.276	0.2422	0.2376	0.3393	0.3485	0.3588	0.301
85	0.2539	0.2964	0.226	0.206	0.2028	0.2015	0.2049	0.1669	0.1603	0.2713	0.2801	0.2906	0.2301
90	0.1818	0.2272	0.1693	0.1668	0.1752	0.179	0.1802	0.1335	0.1089	0.2054	0.211	0.2218	0.18

Tabla 21: Azimut de 90°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9879	0.9882	0.9884	0.9887	0.9884	0.988	0.9882	0.9884	0.9885	0.9883	0.9881	0.9881	0.9883
10	0.9785	0.9795	0.979	0.9795	0.9792	0.9789	0.9791	0.9787	0.9785	0.9793	0.979	0.9791	0.979
15	0.9629	0.9651	0.9635	0.964	0.9639	0.9637	0.964	0.9627	0.9621	0.9645	0.9641	0.9642	0.9637
20	0.9411	0.9451	0.9419	0.9426	0.9427	0.9426	0.9429	0.9404	0.9393	0.9438	0.9432	0.9434	0.9424
25	0.9135	0.9196	0.9144	0.9153	0.9157	0.9158	0.9161	0.9121	0.9102	0.9176	0.9168	0.917	0.9153
30	0.8801	0.8888	0.8812	0.8823	0.8831	0.8834	0.8837	0.8778	0.8751	0.886	0.8848	0.8852	0.8826
35	0.8413	0.853	0.8426	0.8439	0.8452	0.8456	0.8459	0.8379	0.834	0.8491	0.8476	0.8481	0.8445
40	0.7973	0.8124	0.7989	0.8004	0.8021	0.8028	0.8032	0.7927	0.7874	0.8074	0.8055	0.8062	0.8013
45	0.7485	0.7674	0.7505	0.752	0.7543	0.7552	0.7556	0.7424	0.7355	0.7611	0.7587	0.7596	0.7534
50	0.6952	0.7183	0.6977	0.6991	0.702	0.7033	0.7037	0.6875	0.6788	0.7105	0.7077	0.7087	0.701
55	0.6379	0.6654	0.6409	0.6422	0.6457	0.6473	0.6478	0.6282	0.6178	0.6561	0.6528	0.654	0.6447
60	0.5769	0.6092	0.5805	0.5815	0.5858	0.5877	0.5882	0.5652	0.5527	0.5983	0.5944	0.5958	0.5847
65	0.5128	0.5501	0.5169	0.5176	0.5226	0.5249	0.5255	0.4988	0.4843	0.5375	0.533	0.5346	0.5216
70	0.446	0.4885	0.4507	0.451	0.4568	0.4595	0.4601	0.4295	0.4129	0.4742	0.4691	0.4709	0.4558
75	0.3771	0.4249	0.3823	0.3821	0.3887	0.3918	0.3925	0.3579	0.3391	0.4088	0.4031	0.4052	0.3878
80	0.3066	0.3599	0.3123	0.3115	0.3189	0.3224	0.3232	0.2844	0.2634	0.3418	0.3355	0.3378	0.3181
85	0.2349	0.2938	0.2411	0.2396	0.248	0.2519	0.2527	0.2097	0.1865	0.2739	0.2669	0.2694	0.2474
90	0.1627	0.2272	0.1693	0.1671	0.1763	0.1807	0.1815	0.1342	0.1089	0.2054	0.1978	0.2005	0.176



Tabla 22: Azimut de 95°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9863	0.988	0.9897	0.9917	0.9924	0.9925	0.9924	0.9921	0.9907	0.9885	0.9869	0.9863	0.9898
10	0.9752	0.9791	0.9817	0.9853	0.9871	0.9877	0.9874	0.9862	0.9831	0.9798	0.9767	0.9754	0.9821
15	0.9579	0.9645	0.9674	0.9728	0.9757	0.9768	0.9764	0.9738	0.9689	0.9651	0.9606	0.9587	0.9682
20	0.9346	0.9442	0.9471	0.9541	0.9582	0.9599	0.9593	0.9551	0.9483	0.9447	0.9387	0.9362	0.9484
25	0.9054	0.9185	0.9208	0.9296	0.9349	0.9372	0.9363	0.9302	0.9213	0.9187	0.9112	0.9081	0.9227
30	0.8706	0.8875	0.8888	0.8992	0.9058	0.9086	0.9076	0.8992	0.8882	0.8873	0.8782	0.8746	0.8913
35	0.8303	0.8515	0.8513	0.8633	0.8711	0.8746	0.8734	0.8625	0.8491	0.8506	0.84	0.8359	0.8545
40	0.785	0.8108	0.8086	0.822	0.8312	0.8353	0.8339	0.8202	0.8042	0.8091	0.797	0.7925	0.8125
45	0.735	0.7656	0.7612	0.7758	0.7863	0.791	0.7895	0.7726	0.754	0.7629	0.7494	0.7445	0.7656
50	0.6806	0.7163	0.7093	0.7249	0.7367	0.742	0.7403	0.7202	0.6989	0.7125	0.6976	0.6924	0.7143
55	0.6222	0.6633	0.6533	0.6698	0.6827	0.6886	0.6869	0.6633	0.6392	0.6583	0.642	0.6366	0.6588
60	0.5604	0.6069	0.5936	0.6107	0.6249	0.6314	0.6296	0.6022	0.5754	0.6006	0.583	0.5774	0.5997
65	0.4955	0.5477	0.5306	0.5482	0.5636	0.5707	0.5689	0.5375	0.508	0.5398	0.521	0.5154	0.5373
70	0.4281	0.4861	0.4649	0.4827	0.4993	0.5069	0.505	0.4697	0.4375	0.4766	0.4567	0.451	0.472
75	0.3587	0.4224	0.3969	0.4147	0.4324	0.4406	0.4387	0.3992	0.3644	0.4113	0.3903	0.3846	0.4045
80	0.2878	0.3573	0.3271	0.3447	0.3635	0.3722	0.3703	0.3265	0.2893	0.3444	0.3225	0.3169	0.3352
85	0.2159	0.2912	0.2562	0.2732	0.2931	0.3023	0.3004	0.2523	0.2127	0.2765	0.2537	0.2483	0.2646
90	0.1627	0.2272	0.1845	0.2009	0.2216	0.2313	0.2294	0.177	0.1352	0.208	0.1978	0.2005	0.198

Tabla 23: Azimut de 100°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9846	0.9878	0.991	0.9946	0.9963	0.9968	0.9966	0.9958	0.993	0.9887	0.9858	0.9844	0.9913
10	0.9719	0.9787	0.9843	0.9911	0.9949	0.9964	0.9957	0.9935	0.9876	0.9802	0.9745	0.9717	0.985
15	0.953	0.9638	0.9713	0.9814	0.9873	0.9898	0.9887	0.9848	0.9756	0.9658	0.9572	0.9532	0.9727
20	0.9281	0.9433	0.9522	0.9656	0.9736	0.9771	0.9755	0.9696	0.9571	0.9456	0.9342	0.9289	0.9543
25	0.8974	0.9174	0.9271	0.9437	0.9539	0.9584	0.9564	0.9481	0.9322	0.9198	0.9056	0.8991	0.9299
30	0.8611	0.8862	0.8963	0.9159	0.9282	0.9337	0.9313	0.9204	0.9011	0.8885	0.8716	0.864	0.8999
35	0.8195	0.85	0.8599	0.8824	0.8969	0.9034	0.9006	0.8868	0.864	0.8521	0.8325	0.8238	0.8643
40	0.7728	0.8091	0.8183	0.8435	0.86	0.8675	0.8644	0.8474	0.8209	0.8107	0.7885	0.7789	0.8235
45	0.7216	0.7638	0.7717	0.7994	0.818	0.8264	0.823	0.8026	0.7724	0.7647	0.7401	0.7296	0.7778
50	0.6661	0.7143	0.7207	0.7505	0.771	0.7803	0.7767	0.7527	0.7188	0.7145	0.6875	0.6763	0.7274
55	0.6067	0.6612	0.6655	0.6971	0.7195	0.7297	0.7258	0.698	0.6605	0.6604	0.6312	0.6193	0.6729
60	0.544	0.6047	0.6065	0.6396	0.6638	0.6748	0.6707	0.6389	0.5979	0.6028	0.5716	0.5591	0.6145
65	0.4783	0.5454	0.5442	0.5784	0.6043	0.6161	0.6118	0.5759	0.5315	0.5422	0.5091	0.4963	0.5528
70	0.4103	0.4837	0.479	0.514	0.5414	0.554	0.5496	0.5095	0.4619	0.479	0.4443	0.4311	0.4882
75	0.3404	0.42	0.4114	0.4469	0.4757	0.489	0.4845	0.4401	0.3895	0.4138	0.3776	0.3642	0.4211
80	0.2691	0.3548	0.3419	0.3776	0.4077	0.4215	0.417	0.3683	0.3148	0.3469	0.3096	0.2961	0.3521
85	0.197	0.2887	0.2711	0.3065	0.3378	0.3522	0.3476	0.2945	0.2385	0.279	0.2406	0.2272	0.2817
90	0.1627	0.2272	0.1995	0.2343	0.2665	0.2814	0.2769	0.2195	0.1612	0.2105	0.1978	0.2005	0.2198



Tabla 24: Azimut de 105°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.983	0.9876	0.9923	0.9975	1.0001	1.0011	1.0007	0.9995	0.9953	0.9889	0.9846	0.9826	0.9928
10	0.9687	0.9782	0.9868	0.9969	1.0026	1.005	1.0038	1.0008	0.9921	0.9806	0.9722	0.9681	0.988
15	0.9482	0.9631	0.9751	0.99	0.9988	1.0026	1.0008	0.9956	0.9823	0.9665	0.9539	0.9478	0.9771
20	0.9217	0.9425	0.9572	0.9768	0.9887	0.994	0.9915	0.9839	0.9659	0.9465	0.9298	0.9218	0.96
25	0.8895	0.9163	0.9334	0.9576	0.9726	0.9792	0.9761	0.9658	0.943	0.9209	0.9002	0.8904	0.9371
30	0.8518	0.885	0.9037	0.9323	0.9503	0.9584	0.9547	0.9413	0.9139	0.8898	0.8652	0.8536	0.9083
35	0.8088	0.8486	0.8684	0.9012	0.9222	0.9316	0.9274	0.9107	0.8786	0.8535	0.8251	0.8119	0.874
40	0.7609	0.8075	0.8278	0.8646	0.8884	0.8992	0.8944	0.8742	0.8373	0.8123	0.7802	0.7656	0.8344
45	0.7084	0.762	0.7822	0.8226	0.8492	0.8612	0.856	0.8321	0.7904	0.7665	0.7309	0.7149	0.7897
50	0.6518	0.7124	0.732	0.7756	0.8048	0.8181	0.8124	0.7846	0.7383	0.7164	0.6776	0.6603	0.7404
55	0.5914	0.6591	0.6776	0.7239	0.7556	0.77	0.764	0.7321	0.6813	0.6624	0.6206	0.6023	0.6867
60	0.5278	0.6025	0.6193	0.668	0.7019	0.7174	0.7111	0.675	0.6199	0.605	0.5604	0.5412	0.6291
65	0.4614	0.5431	0.5575	0.6081	0.6442	0.6607	0.6541	0.6137	0.5546	0.5445	0.4974	0.4774	0.5681
70	0.3928	0.4813	0.4928	0.5448	0.5829	0.6003	0.5934	0.5486	0.4858	0.4814	0.4322	0.4116	0.504
75	0.3224	0.4175	0.4256	0.4786	0.5183	0.5365	0.5295	0.4803	0.4141	0.4162	0.3651	0.3442	0.4374
80	0.2507	0.3523	0.3564	0.4099	0.4511	0.47	0.4629	0.4093	0.3399	0.3494	0.2968	0.2756	0.3687
85	0.1785	0.2862	0.2858	0.3392	0.3817	0.4012	0.3941	0.3361	0.2639	0.2815	0.2278	0.209	0.2987
90	0.1627	0.2272	0.2142	0.2671	0.3107	0.3307	0.3235	0.2612	0.1867	0.2131	0.1978	0.2005	0.2413

Tabla 25: Azimut de 110°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9814	0.9874	0.9936	1.0003	1.0039	1.0054	1.0046	1.003	0.9974	0.9891	0.9835	0.9808	0.9942
10	0.9655	0.9778	0.9893	1.0024	1.0101	1.0134	1.0118	1.0079	0.9964	0.9811	0.97	0.9646	0.9909
15	0.9435	0.9625	0.9789	0.9983	1.01	1.0151	1.0126	1.0062	0.9887	0.9671	0.9506	0.9426	0.9813
20	0.9155	0.9416	0.9622	0.9878	1.0035	1.0105	1.0071	0.9978	0.9744	0.9473	0.9255	0.9149	0.9657
25	0.8818	0.9153	0.9395	0.9711	0.9908	0.9996	0.9954	0.983	0.9535	0.9219	0.8948	0.8818	0.944
30	0.8427	0.8837	0.9109	0.9483	0.9719	0.9825	0.9775	0.9617	0.9263	0.891	0.8588	0.8435	0.9166
35	0.7983	0.8472	0.8767	0.9196	0.9469	0.9593	0.9535	0.934	0.8928	0.855	0.8178	0.8003	0.8835
40	0.7491	0.8059	0.837	0.8852	0.9161	0.9301	0.9237	0.9003	0.8533	0.8139	0.7721	0.7525	0.8449
45	0.6955	0.7602	0.7923	0.8452	0.8796	0.8952	0.8882	0.8608	0.808	0.7683	0.722	0.7006	0.8013
50	0.6378	0.7105	0.743	0.8001	0.8378	0.8549	0.8473	0.8157	0.7573	0.7183	0.6679	0.6448	0.7529
55	0.5765	0.6571	0.6894	0.7501	0.7908	0.8094	0.8012	0.7653	0.7016	0.6645	0.6103	0.5857	0.7002
60	0.512	0.6004	0.6317	0.6956	0.7392	0.759	0.7505	0.7101	0.6414	0.6071	0.5495	0.5236	0.6434
65	0.4449	0.5409	0.5706	0.6371	0.6832	0.7042	0.6953	0.6505	0.5771	0.5467	0.486	0.459	0.583
70	0.3757	0.479	0.5063	0.5749	0.6233	0.6454	0.6362	0.5868	0.5092	0.4837	0.4203	0.3925	0.5194
75	0.3048	0.4151	0.4395	0.5095	0.5599	0.5829	0.5735	0.5196	0.4381	0.4186	0.3529	0.3246	0.4532
80	0.2328	0.3499	0.3706	0.4414	0.4935	0.5174	0.5077	0.4493	0.3644	0.3519	0.2844	0.2557	0.3849
85	0.1672	0.2837	0.3001	0.3711	0.4246	0.4491	0.4394	0.3766	0.2887	0.284	0.2152	0.209	0.3174
90	0.1627	0.2272	0.2286	0.2991	0.3537	0.3787	0.369	0.3018	0.2115	0.2156	0.1978	0.2005	0.2622



Tabla 26: Azimut de 115°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9799	0.9872	0.9948	1.003	1.0076	1.0094	1.0085	1.0065	0.9995	0.9893	0.9825	0.9791	0.9956
10	0.9624	0.9774	0.9918	1.0079	1.0174	1.0215	1.0195	1.0148	1.0006	0.9815	0.9679	0.9612	0.9936
15	0.9389	0.9619	0.9825	1.0063	1.0208	1.0272	1.0241	1.0164	0.995	0.9677	0.9475	0.9375	0.9855
20	0.9095	0.9408	0.967	0.9984	1.0178	1.0265	1.0223	1.0113	0.9826	0.9482	0.9213	0.9082	0.9712
25	0.8744	0.9143	0.9454	0.9842	1.0084	1.0193	1.0141	0.9996	0.9637	0.9229	0.8896	0.8735	0.9508
30	0.8338	0.8825	0.9179	0.9638	0.9928	1.0058	0.9996	0.9813	0.9383	0.8922	0.8527	0.8337	0.9245
35	0.7882	0.8458	0.8847	0.9374	0.9708	0.986	0.9788	0.9566	0.9066	0.8563	0.8108	0.789	0.8926
40	0.7378	0.8044	0.846	0.905	0.9429	0.96	0.952	0.9256	0.8687	0.8155	0.7642	0.7399	0.8552
45	0.683	0.7586	0.8022	0.8671	0.9091	0.9281	0.9193	0.8886	0.8249	0.77	0.7134	0.6867	0.8126
50	0.6243	0.7087	0.7537	0.8238	0.8697	0.8905	0.881	0.8457	0.7757	0.7202	0.6586	0.6297	0.7651
55	0.562	0.6551	0.7008	0.7754	0.8249	0.8475	0.8373	0.7975	0.7213	0.6664	0.6002	0.5696	0.7132
60	0.4968	0.5983	0.6438	0.7224	0.7752	0.7993	0.7886	0.7441	0.6622	0.6092	0.5389	0.5066	0.6571
65	0.4289	0.5387	0.5832	0.6651	0.7209	0.7464	0.7352	0.686	0.5988	0.5489	0.4749	0.4412	0.5974
70	0.3591	0.4767	0.5194	0.6039	0.6624	0.6891	0.6775	0.6237	0.5317	0.486	0.4088	0.3741	0.5344
75	0.2877	0.4128	0.453	0.5393	0.6001	0.6279	0.616	0.5575	0.4612	0.4209	0.3411	0.3056	0.4686
80	0.2154	0.3475	0.3843	0.4718	0.5345	0.5631	0.5511	0.488	0.388	0.3542	0.2723	0.2363	0.4006
85	0.1672	0.2813	0.314	0.4019	0.4661	0.4954	0.4833	0.4157	0.3126	0.2864	0.2063	0.209	0.3366
90	0.1627	0.2272	0.2426	0.3301	0.3953	0.4252	0.4131	0.3411	0.2355	0.218	0.1978	0.2005	0.2824

Tabla 27: Azimut de 120°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9784	0.987	0.996	1.0056	1.0111	1.0134	1.0122	1.0098	1.0016	0.9895	0.9815	0.9775	0.997
10	0.9595	0.977	0.9941	1.013	1.0243	1.0293	1.0268	1.0214	1.0047	0.9819	0.9659	0.9579	0.9963
15	0.9345	0.9613	0.9859	1.0141	1.0312	1.0388	1.035	1.0262	1.001	0.9683	0.9444	0.9326	0.9894
20	0.9037	0.94	0.9716	1.0086	1.0315	1.0418	1.0368	1.0243	0.9905	0.9489	0.9173	0.9017	0.9764
25	0.8672	0.9133	0.9511	0.9968	1.0254	1.0383	1.032	1.0156	0.9734	0.9239	0.8847	0.8655	0.9573
30	0.8254	0.8814	0.9246	0.9787	1.0128	1.0282	1.0208	1.0002	0.9497	0.8934	0.8469	0.8242	0.9322
35	0.7785	0.8445	0.8924	0.9544	0.9938	1.0116	1.0031	0.9783	0.9197	0.8577	0.8041	0.7782	0.9014
40	0.7269	0.8029	0.8547	0.9241	0.9686	0.9888	0.9792	0.9498	0.8835	0.817	0.7567	0.7278	0.865
45	0.671	0.7569	0.8117	0.888	0.9373	0.9597	0.9492	0.9152	0.8412	0.7716	0.7051	0.6733	0.8234
50	0.6113	0.7069	0.7639	0.8464	0.9002	0.9247	0.9134	0.8746	0.7932	0.7219	0.6496	0.6153	0.7768
55	0.5482	0.6533	0.7117	0.7996	0.8576	0.884	0.8719	0.8283	0.7401	0.6683	0.5906	0.5541	0.7256
60	0.4821	0.5964	0.6553	0.748	0.8098	0.8379	0.8251	0.7767	0.6821	0.6112	0.5287	0.4902	0.6703
65	0.4136	0.5366	0.5953	0.6919	0.7571	0.7868	0.7734	0.7201	0.6196	0.551	0.4642	0.4241	0.6111
70	0.3431	0.4746	0.532	0.6317	0.6999	0.731	0.7172	0.659	0.5532	0.4881	0.3978	0.3563	0.5487
75	0.2713	0.4106	0.4659	0.5679	0.6386	0.6709	0.6567	0.5938	0.4834	0.4232	0.3298	0.2874	0.4833
80	0.1987	0.3453	0.3975	0.501	0.5738	0.607	0.5926	0.525	0.4106	0.3565	0.2608	0.2177	0.4155
85	0.1672	0.279	0.3273	0.4314	0.5058	0.5398	0.5253	0.4532	0.3355	0.2887	0.2063	0.209	0.3557
90	0.1627	0.2272	0.256	0.3597	0.4352	0.4698	0.4553	0.3788	0.2585	0.2203	0.1978	0.2005	0.3018



Tabla 28: Azimut de 125°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.977	0.9868	0.9971	1.0081	1.0144	1.0171	1.0157	1.013	1.0035	0.9897	0.9805	0.9759	0.9982
10	0.9567	0.9766	0.9963	1.018	1.031	1.0367	1.0339	1.0276	1.0085	0.9823	0.9639	0.9548	0.9989
15	0.9304	0.9607	0.9893	1.0214	1.0411	1.0498	1.0455	1.0355	1.0067	0.9689	0.9415	0.928	0.9932
20	0.8982	0.9393	0.9759	1.0183	1.0446	1.0564	1.0506	1.0366	0.998	0.9497	0.9135	0.8956	0.9814
25	0.8604	0.9124	0.9565	1.0088	1.0415	1.0562	1.049	1.0308	0.9826	0.9248	0.88	0.8579	0.9634
30	0.8173	0.8803	0.931	0.9928	1.0318	1.0494	1.0409	1.0182	0.9606	0.8945	0.8413	0.8152	0.9394
35	0.7692	0.8433	0.8997	0.9706	1.0156	1.036	1.0262	0.9988	0.9322	0.8589	0.7977	0.7679	0.9097
40	0.7165	0.8015	0.8629	0.9422	0.993	1.0161	1.005	0.9728	0.8974	0.8184	0.7495	0.7162	0.8743
45	0.6596	0.7554	0.8208	0.9079	0.9642	0.9897	0.9776	0.9405	0.8566	0.7731	0.6972	0.6606	0.8336
50	0.599	0.7053	0.7737	0.868	0.9293	0.9572	0.9441	0.9019	0.8099	0.7236	0.641	0.6015	0.7879
55	0.535	0.6515	0.7221	0.8226	0.8887	0.9187	0.9048	0.8575	0.7579	0.6701	0.5815	0.5394	0.7375
60	0.4681	0.5945	0.6663	0.7723	0.8426	0.8746	0.8599	0.8076	0.7009	0.6131	0.519	0.4747	0.6828
65	0.399	0.5347	0.6068	0.7173	0.7914	0.8252	0.8097	0.7524	0.6393	0.553	0.4541	0.4079	0.6242
70	0.328	0.4725	0.5439	0.6581	0.7354	0.7708	0.7548	0.6925	0.5737	0.4902	0.3873	0.3395	0.5622
75	0.2558	0.4085	0.4781	0.595	0.6752	0.7118	0.6954	0.6283	0.5044	0.4253	0.319	0.27	0.4972
80	0.1829	0.3431	0.41	0.5286	0.6111	0.6487	0.6321	0.5602	0.4321	0.3587	0.2498	0.2174	0.4312
85	0.1672	0.2769	0.34	0.4594	0.5435	0.582	0.5652	0.4887	0.3572	0.2909	0.2063	0.209	0.3739
90	0.1627	0.2272	0.2687	0.3878	0.4731	0.5121	0.4953	0.4145	0.2803	0.2225	0.1978	0.2005	0.3202

Tabla 29: Azimut de 130°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9757	0.9866	0.9981	1.0104	1.0175	1.0206	1.0191	1.0159	1.0053	0.9899	0.9796	0.9744	0.9994
10	0.9541	0.9762	0.9984	1.0226	1.0372	1.0437	1.0405	1.0335	1.0121	0.9826	0.9621	0.9519	1.0012
15	0.9264	0.9602	0.9924	1.0283	1.0503	1.0602	1.0553	1.0443	1.012	0.9694	0.9388	0.9236	0.9968
20	0.893	0.9386	0.98	1.0274	1.0568	1.0701	1.0635	1.0482	1.0051	0.9504	0.9099	0.8898	0.9861
25	0.854	0.9115	0.9615	1.02	1.0566	1.0731	1.065	1.0451	0.9913	0.9257	0.8755	0.8508	0.9692
30	0.8097	0.8793	0.937	1.0061	1.0497	1.0694	1.0598	1.035	0.9709	0.8955	0.836	0.8068	0.9463
35	0.7605	0.8421	0.9066	0.9857	1.0361	1.0589	1.0479	1.0181	0.9439	0.8601	0.7916	0.7582	0.9175
40	0.7068	0.8002	0.8706	0.9592	1.0159	1.0417	1.0293	0.9944	0.9105	0.8197	0.7428	0.7054	0.883
45	0.6489	0.7539	0.8293	0.9266	0.9894	1.0179	1.0043	0.9642	0.871	0.7746	0.6897	0.6487	0.8432
50	0.5873	0.7037	0.7829	0.8881	0.9566	0.9877	0.973	0.9276	0.8255	0.7252	0.633	0.5886	0.7983
55	0.5225	0.6498	0.7318	0.8442	0.9178	0.9514	0.9356	0.885	0.7746	0.6718	0.5729	0.5256	0.7486
60	0.455	0.5927	0.6766	0.7951	0.8734	0.9091	0.8925	0.8366	0.7185	0.6149	0.5099	0.46	0.6945
65	0.3852	0.5328	0.6175	0.7411	0.8236	0.8612	0.8439	0.7828	0.6578	0.5548	0.4446	0.3926	0.6365
70	0.3138	0.4706	0.555	0.6828	0.7689	0.8081	0.7902	0.724	0.5928	0.4921	0.3774	0.3236	0.5749
75	0.2411	0.4066	0.4896	0.6204	0.7095	0.7502	0.7318	0.6606	0.5241	0.4273	0.3088	0.2537	0.5103
80	0.1716	0.3411	0.4217	0.5545	0.6461	0.6879	0.6691	0.5932	0.4521	0.3607	0.2394	0.2174	0.4462
85	0.1672	0.2748	0.3519	0.4856	0.5789	0.6216	0.6027	0.5221	0.3775	0.2929	0.2063	0.209	0.3909
90	0.1627	0.2272	0.2806	0.4142	0.5087	0.5518	0.5329	0.448	0.3007	0.2245	0.1978	0.2005	0.3375



Tabla 30: Azimut de 135°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9744	0.9864	0.9991	1.0126	1.0205	1.0238	1.0221	1.0187	1.007	0.9901	0.9787	0.9731	1.0005
10	0.9516	0.9759	1.0003	1.0269	1.043	1.0502	1.0466	1.039	1.0154	0.983	0.9604	0.9492	1.0035
15	0.9228	0.9597	0.9953	1.0347	1.059	1.0699	1.0644	1.0525	1.017	0.9699	0.9363	0.9195	1.0001
20	0.8882	0.9379	0.9839	1.0359	1.0682	1.0828	1.0756	1.0589	1.0116	0.951	0.9065	0.8844	0.9904
25	0.848	0.9107	0.9663	1.0304	1.0706	1.0889	1.0799	1.0583	0.9994	0.9265	0.8714	0.8442	0.9745
30	0.8027	0.8783	0.9426	1.0184	1.0663	1.088	1.0774	1.0507	0.9803	0.8965	0.8311	0.799	0.9526
35	0.7525	0.841	0.913	0.9998	1.0551	1.0802	1.068	1.036	0.9547	0.8612	0.786	0.7492	0.9247
40	0.6977	0.799	0.8778	0.9749	1.0372	1.0655	1.0519	1.0145	0.9226	0.8209	0.7365	0.6953	0.8912
45	0.639	0.7526	0.8372	0.9439	1.0128	1.0441	1.0291	0.9862	0.8843	0.776	0.6828	0.6376	0.8521
50	0.5766	0.7022	0.7914	0.9069	0.9819	1.0161	0.9998	0.9515	0.84	0.7266	0.6255	0.5766	0.8079
55	0.511	0.6482	0.7409	0.8642	0.9449	0.9817	0.9643	0.9105	0.7901	0.6734	0.5649	0.5127	0.7589
60	0.4428	0.5911	0.6862	0.8162	0.902	0.9411	0.9228	0.8635	0.7349	0.6165	0.5015	0.4465	0.7054
65	0.3725	0.5311	0.6276	0.7632	0.8535	0.8947	0.8755	0.8109	0.6749	0.5566	0.4357	0.3783	0.6479
70	0.3005	0.4688	0.5654	0.7057	0.7999	0.8428	0.823	0.7531	0.6105	0.4939	0.3682	0.3089	0.5867
75	0.2275	0.4047	0.5003	0.644	0.7414	0.7858	0.7655	0.6906	0.5423	0.4291	0.2994	0.2386	0.5224
80	0.1716	0.3392	0.4326	0.5786	0.6785	0.7242	0.7035	0.6237	0.4707	0.3626	0.2298	0.2174	0.461
85	0.1672	0.2729	0.3629	0.5099	0.6118	0.6583	0.6374	0.553	0.3963	0.2948	0.2063	0.209	0.4067
90	0.1627	0.2272	0.2917	0.4386	0.5416	0.5887	0.5678	0.479	0.3196	0.2264	0.1978	0.2005	0.3535

Tabla 31: Azimut de 140°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9733	0.9863	1	1.0146	1.0231	1.0268	1.025	1.0212	1.0085	0.9902	0.9779	0.9718	1.0016
10	0.9494	0.9756	1.0021	1.0309	1.0483	1.0561	1.0522	1.044	1.0185	0.9833	0.9588	0.9467	1.0055
15	0.9194	0.9593	0.9979	1.0406	1.0669	1.0787	1.0728	1.0599	1.0215	0.9704	0.934	0.9158	1.0031
20	0.8838	0.9373	0.9874	1.0436	1.0786	1.0945	1.0866	1.0687	1.0176	0.9516	0.9035	0.8795	0.9944
25	0.8426	0.91	0.9706	1.0399	1.0835	1.1032	1.0935	1.0704	1.0067	0.9273	0.8676	0.8381	0.9795
30	0.7962	0.8775	0.9477	1.0296	1.0815	1.105	1.0935	1.065	0.989	0.8974	0.8267	0.7918	0.9584
35	0.7451	0.84	0.9189	1.0127	1.0725	1.0997	1.0864	1.0524	0.9646	0.8622	0.7809	0.741	0.9314
40	0.6895	0.7978	0.8844	0.9894	1.0567	1.0874	1.0725	1.0328	0.9337	0.822	0.7307	0.6861	0.8986
45	0.6298	0.7514	0.8444	0.9597	1.0342	1.0681	1.0518	1.0064	0.8965	0.7772	0.6765	0.6274	0.8603
50	0.5667	0.7009	0.7993	0.924	1.0051	1.0421	1.0244	0.9733	0.8532	0.728	0.6186	0.5656	0.8168
55	0.5004	0.6468	0.7493	0.8825	0.9697	1.0094	0.9905	0.9337	0.8042	0.6748	0.5575	0.5009	0.7683
60	0.4316	0.5895	0.695	0.8355	0.9282	0.9704	0.9505	0.8881	0.7498	0.6181	0.4937	0.434	0.7154
65	0.3608	0.5295	0.6367	0.7834	0.8809	0.9254	0.9045	0.8366	0.6905	0.5582	0.4276	0.3653	0.6583
70	0.2884	0.4672	0.5749	0.7266	0.8282	0.8746	0.853	0.7798	0.6267	0.4956	0.3598	0.2954	0.5975
75	0.2151	0.403	0.51	0.6655	0.7705	0.8185	0.7964	0.718	0.5589	0.4308	0.2908	0.2257	0.5336
80	0.1716	0.3375	0.4426	0.6005	0.7082	0.7574	0.7349	0.6516	0.4876	0.3643	0.221	0.2174	0.4746
85	0.1672	0.2712	0.373	0.5321	0.6418	0.6919	0.6692	0.5813	0.4134	0.2966	0.2063	0.209	0.4211
90	0.1627	0.2272	0.3018	0.4609	0.5718	0.6224	0.5997	0.5074	0.3368	0.2282	0.1978	0.2005	0.3681



Tabla 32: Azimut de 145°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9723	0.9861	1.0008	1.0164	1.0255	1.0295	1.0275	1.0235	1.0099	0.9904	0.9772	0.9707	1.0025
10	0.9474	0.9753	1.0037	1.0344	1.0531	1.0614	1.0573	1.0485	1.0212	0.9835	0.9574	0.9444	1.0073
15	0.9164	0.9588	1.0003	1.0459	1.074	1.0867	1.0803	1.0666	1.0256	0.9708	0.9319	0.9125	1.0058
20	0.8798	0.9368	0.9905	1.0506	1.088	1.105	1.0965	1.0776	1.0229	0.9522	0.9007	0.8751	0.998
25	0.8377	0.9093	0.9745	1.0485	1.0951	1.1162	1.1058	1.0814	1.0133	0.9279	0.8642	0.8326	0.9839
30	0.7904	0.8767	0.9523	1.0398	1.0952	1.1203	1.1079	1.0779	0.9968	0.8981	0.8226	0.7853	0.9636
35	0.7384	0.8391	0.9242	1.0243	1.0882	1.1172	1.103	1.0672	0.9735	0.8631	0.7763	0.7335	0.9373
40	0.682	0.7968	0.8903	1.0023	1.0743	1.107	1.0911	1.0494	0.9436	0.8231	0.7256	0.6777	0.9053
45	0.6216	0.7503	0.8509	0.9739	1.0535	1.0897	1.0722	1.0245	0.9073	0.7783	0.6708	0.6183	0.8676
50	0.5578	0.6997	0.8063	0.9394	1.026	1.0654	1.0465	0.9929	0.865	0.7292	0.6124	0.5557	0.8247
55	0.4909	0.6455	0.7569	0.8989	0.992	1.0344	1.0141	0.9547	0.8168	0.6761	0.5509	0.4903	0.7768
60	0.4215	0.5882	0.703	0.8529	0.9517	0.9968	0.9754	0.9102	0.7631	0.6194	0.4867	0.4228	0.7243
65	0.3502	0.5281	0.645	0.8016	0.9055	0.953	0.9306	0.8597	0.7044	0.5596	0.4203	0.3536	0.6676
70	0.2775	0.4657	0.5835	0.7454	0.8537	0.9032	0.8801	0.8037	0.6411	0.4971	0.3522	0.2832	0.6072
75	0.2038	0.4015	0.5188	0.6847	0.7967	0.8479	0.8241	0.7426	0.5737	0.4323	0.283	0.2257	0.5446
80	0.1716	0.336	0.4515	0.6201	0.7349	0.7874	0.7632	0.6767	0.5028	0.3659	0.2148	0.2174	0.4869
85	0.1672	0.2696	0.382	0.552	0.6688	0.7221	0.6978	0.6066	0.4287	0.2982	0.2063	0.209	0.434
90	0.1627	0.2272	0.3109	0.4808	0.5988	0.6527	0.6284	0.5328	0.3522	0.2298	0.1978	0.2005	0.3812

Tabla 33: Azimut de 150°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9714	0.986	1.0015	1.018	1.0276	1.0319	1.0298	1.0255	1.0112	0.9905	0.9766	0.9697	1.0033
10	0.9456	0.9751	1.0051	1.0376	1.0573	1.0662	1.0617	1.0525	1.0237	0.9838	0.9562	0.9424	1.0089
15	0.9138	0.9585	1.0024	1.0505	1.0803	1.0937	1.087	1.0726	1.0292	0.9711	0.93	0.9095	1.0082
20	0.8763	0.9363	0.9933	1.0567	1.0963	1.1142	1.1053	1.0854	1.0277	0.9527	0.8983	0.8712	1.0011
25	0.8333	0.9087	0.9779	1.0561	1.1053	1.1276	1.1166	1.091	1.0191	0.9285	0.8612	0.8278	0.9878
30	0.7853	0.876	0.9564	1.0487	1.1072	1.1338	1.1207	1.0892	1.0037	0.8988	0.8191	0.7796	0.9682
35	0.7325	0.8383	0.9289	1.0345	1.102	1.1327	1.1177	1.0802	0.9813	0.8639	0.7722	0.727	0.9426
40	0.6754	0.7959	0.8955	1.0137	1.0898	1.1243	1.1075	1.0639	0.9524	0.824	0.721	0.6704	0.9111
45	0.6144	0.7493	0.8567	0.9865	1.0705	1.1087	1.0902	1.0405	0.9169	0.7793	0.6658	0.6102	0.8741
50	0.5499	0.6986	0.8126	0.9529	1.0444	1.0861	1.066	1.0102	0.8753	0.7303	0.607	0.5469	0.8317
55	0.4825	0.6444	0.7635	0.9134	1.0116	1.0564	1.035	0.9731	0.8278	0.6772	0.5451	0.481	0.7843
60	0.4127	0.587	0.71	0.8681	0.9725	1.0201	0.9974	0.9297	0.7749	0.6206	0.4806	0.4129	0.7322
65	0.3409	0.5268	0.6523	0.8175	0.9272	0.9773	0.9536	0.8801	0.7167	0.5609	0.4139	0.3432	0.6759
70	0.2678	0.4644	0.591	0.7619	0.8762	0.9284	0.9039	0.8248	0.6538	0.4984	0.3456	0.2724	0.6157
75	0.1939	0.4002	0.5266	0.7017	0.8198	0.8738	0.8486	0.7642	0.5868	0.4337	0.2761	0.2257	0.5542
80	0.1716	0.3346	0.4594	0.6374	0.7585	0.8138	0.7882	0.6987	0.516	0.3672	0.2148	0.2174	0.4981
85	0.1672	0.2683	0.39	0.5694	0.6926	0.7488	0.723	0.6289	0.4421	0.2996	0.2063	0.209	0.4454
90	0.1627	0.2272	0.3189	0.4984	0.6227	0.6794	0.6537	0.5552	0.3657	0.2312	0.1978	0.2005	0.3928



Tabla 34: Azimut de 150°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9706	0.9859	1.0021	1.0193	1.0295	1.0339	1.0317	1.0272	1.0122	0.9906	0.9761	0.9688	1.004
10	0.944	0.9749	1.0064	1.0403	1.061	1.0702	1.0656	1.0559	1.0258	0.984	0.9551	0.9407	1.0103
15	0.9115	0.9582	1.0042	1.0545	1.0857	1.0997	1.0927	1.0776	1.0323	0.9714	0.9284	0.907	1.0103
20	0.8732	0.9359	0.9957	1.062	1.1034	1.1222	1.1128	1.0921	1.0317	0.9531	0.8962	0.8678	1.0039
25	0.8296	0.9082	0.9809	1.0626	1.1141	1.1375	1.1259	1.0993	1.0242	0.929	0.8586	0.8236	0.9911
30	0.7809	0.8754	0.9599	1.0564	1.1176	1.1454	1.1317	1.099	1.0096	0.8994	0.816	0.7747	0.9722
35	0.7274	0.8376	0.9329	1.0433	1.1139	1.146	1.1303	1.0914	0.9881	0.8646	0.7687	0.7213	0.9471
40	0.6697	0.7952	0.9	1.0236	1.1031	1.1392	1.1216	1.0764	0.9598	0.8247	0.717	0.6641	0.9162
45	0.6081	0.7484	0.8616	0.9972	1.0851	1.1251	1.1057	1.0542	0.9251	0.7801	0.6614	0.6032	0.8796
50	0.5431	0.6977	0.8179	0.9646	1.0602	1.1038	1.0827	1.025	0.8841	0.7312	0.6023	0.5394	0.8377
55	0.4753	0.6434	0.7693	0.9258	1.0285	1.0754	1.0529	0.9889	0.8372	0.6782	0.5401	0.4729	0.7907
60	0.405	0.5859	0.7161	0.8812	0.9903	1.0401	1.0163	0.9463	0.7848	0.6217	0.4753	0.4044	0.739
65	0.3329	0.5258	0.6587	0.8311	0.9459	0.9983	0.9734	0.8975	0.7271	0.562	0.4083	0.3343	0.6829
70	0.2595	0.4633	0.5976	0.776	0.8955	0.9501	0.9244	0.8428	0.6646	0.4995	0.3398	0.2632	0.623
75	0.1854	0.399	0.5332	0.7162	0.8397	0.8961	0.8697	0.7827	0.5979	0.4348	0.2702	0.2257	0.5625
80	0.1716	0.3334	0.4661	0.6521	0.7787	0.8365	0.8096	0.7176	0.5273	0.3684	0.2148	0.2174	0.5078
85	0.1672	0.2671	0.3968	0.5843	0.713	0.7717	0.7447	0.6479	0.4535	0.3007	0.2063	0.209	0.4552
90	0.1627	0.2272	0.3258	0.5133	0.6431	0.7024	0.6753	0.5743	0.3771	0.2324	0.1978	0.2005	0.4027

Tabla 35: Azimut de 160°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.97	0.9858	1.0026	1.0204	1.031	1.0356	1.0333	1.0286	1.0131	0.9907	0.9756	0.9681	1.0046
10	0.9428	0.9747	1.0074	1.0425	1.064	1.0736	1.0687	1.0588	1.0275	0.9842	0.9543	0.9393	1.0115
15	0.9096	0.9579	1.0057	1.0578	1.0901	1.1047	1.0974	1.0819	1.0348	0.9717	0.9271	0.9049	1.012
20	0.8707	0.9356	0.9977	1.0664	1.1093	1.1288	1.1191	1.0977	1.0351	0.9534	0.8945	0.865	1.0061
25	0.8265	0.9078	0.9833	1.068	1.1214	1.1456	1.1336	1.1061	1.0283	0.9294	0.8565	0.8202	0.9939
30	0.7772	0.8749	0.9628	1.0627	1.1262	1.155	1.1408	1.1071	1.0144	0.8999	0.8135	0.7706	0.9754
35	0.7232	0.837	0.9362	1.0506	1.1238	1.157	1.1407	1.1006	0.9936	0.8652	0.7658	0.7167	0.9509
40	0.665	0.7945	0.9037	1.0317	1.1141	1.1516	1.1332	1.0867	0.966	0.8254	0.7138	0.6588	0.9204
45	0.6029	0.7477	0.8657	1.0061	1.0972	1.1387	1.1185	1.0656	0.9319	0.7808	0.6579	0.5975	0.8842
50	0.5375	0.697	0.8224	0.9742	1.0733	1.1185	1.0966	1.0373	0.8914	0.732	0.5984	0.5331	0.8426
55	0.4693	0.6426	0.774	0.936	1.0425	1.0911	1.0677	1.002	0.845	0.679	0.5359	0.4662	0.796
60	0.3987	0.5851	0.7211	0.892	1.0051	1.0567	1.032	0.9601	0.7929	0.6225	0.4709	0.3973	0.7445
65	0.3263	0.5249	0.6639	0.8424	0.9613	1.0156	0.9898	0.9119	0.7356	0.5629	0.4038	0.3269	0.6888
70	0.2527	0.4624	0.603	0.7876	0.9115	0.9681	0.9414	0.8577	0.6735	0.5004	0.335	0.2556	0.6291
75	0.1783	0.3981	0.5388	0.7281	0.8561	0.9146	0.8871	0.798	0.607	0.4358	0.2653	0.2257	0.5694
80	0.1716	0.3325	0.4717	0.6643	0.7954	0.8553	0.8274	0.7331	0.5366	0.3694	0.2148	0.2174	0.5158
85	0.1672	0.2661	0.4025	0.5966	0.7299	0.7908	0.7627	0.6637	0.4629	0.3017	0.2063	0.209	0.4633
90	0.1627	0.2272	0.3314	0.5256	0.6601	0.7214	0.6933	0.59	0.3865	0.2334	0.1978	0.2005	0.4108



Tabla 36: Azimut de 165°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9695	0.9858	1.003	1.0213	1.0322	1.0369	1.0345	1.0297	1.0138	0.9908	0.9753	0.9676	1.005
10	0.9418	0.9746	1.0082	1.0443	1.0663	1.0762	1.0712	1.061	1.0288	0.9843	0.9536	0.9382	1.0124
15	0.9081	0.9577	1.0069	1.0604	1.0937	1.1086	1.1011	1.0852	1.0369	0.9719	0.9261	0.9032	1.0133
20	0.8688	0.9353	0.9992	1.0698	1.114	1.134	1.124	1.102	1.0378	0.9537	0.8931	0.8629	1.0079
25	0.8241	0.9075	0.9853	1.0722	1.1271	1.152	1.1396	1.1115	1.0315	0.9298	0.8548	0.8175	0.9961
30	0.7743	0.8745	0.9651	1.0677	1.133	1.1626	1.148	1.1134	1.0182	0.9003	0.8115	0.7674	0.978
35	0.7199	0.8366	0.9388	1.0563	1.1315	1.1657	1.1489	1.1079	0.998	0.8656	0.7635	0.713	0.9538
40	0.6613	0.794	0.9067	1.038	1.1227	1.1613	1.1424	1.0949	0.9709	0.8259	0.7112	0.6547	0.9237
45	0.5989	0.7472	0.8689	1.0131	1.1067	1.1493	1.1286	1.0745	0.9372	0.7814	0.655	0.593	0.8878
50	0.5331	0.6964	0.8258	0.9817	1.0836	1.13	1.1075	1.0469	0.8972	0.7325	0.5954	0.5282	0.8465
55	0.4646	0.642	0.7778	0.9441	1.0535	1.1034	1.0793	1.0123	0.8511	0.6797	0.5327	0.461	0.8001
60	0.3937	0.5844	0.725	0.9005	1.0167	1.0697	1.0443	0.971	0.7993	0.6232	0.4674	0.3918	0.7489
65	0.3211	0.5242	0.6681	0.8512	0.9734	1.0293	1.0027	0.9232	0.7422	0.5636	0.4001	0.3211	0.6933
70	0.2473	0.4616	0.6073	0.7967	0.9241	0.9823	0.9547	0.8694	0.6802	0.5012	0.3313	0.2495	0.6338
75	0.1759	0.3973	0.5432	0.7374	0.869	0.9292	0.9009	0.81	0.6139	0.4365	0.2615	0.2257	0.575
80	0.1716	0.3317	0.4762	0.6737	0.8086	0.8703	0.8415	0.7453	0.5437	0.3702	0.2148	0.2174	0.5221
85	0.1672	0.2653	0.4069	0.6061	0.7433	0.8059	0.7769	0.676	0.4701	0.3025	0.2063	0.209	0.4696
90	0.1627	0.2272	0.3358	0.5351	0.6734	0.7523	0.7074	0.6024	0.3937	0.2341	0.1978	0.2005	0.4185

Tabla 37: Azimut de 170°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9691	0.9857	1.0033	1.022	1.033	1.0379	1.0354	1.0305	1.0143	0.9908	0.975	0.9672	1.0054
10	0.9411	0.9745	1.0087	1.0455	1.068	1.0781	1.073	1.0626	1.0298	0.9844	0.9531	0.9374	1.013
15	0.907	0.9576	1.0077	1.0623	1.0962	1.1115	1.1038	1.0876	1.0383	0.9721	0.9254	0.902	1.0143
20	0.8674	0.9351	1.0004	1.0723	1.1173	1.1377	1.1275	1.1052	1.0397	0.9539	0.8921	0.8613	1.0091
25	0.8223	0.9073	0.9866	1.0753	1.1312	1.1566	1.144	1.1154	1.0339	0.93	0.8536	0.8155	0.9976
30	0.7723	0.8742	0.9667	1.0713	1.1378	1.168	1.1531	1.118	1.021	0.9006	0.8101	0.7651	0.9799
35	0.7176	0.8363	0.9407	1.0604	1.1371	1.1719	1.1548	1.1131	1.0011	0.8659	0.7619	0.7104	0.9559
40	0.6587	0.7937	0.9088	1.0426	1.1289	1.1682	1.149	1.1007	0.9744	0.8262	0.7094	0.6518	0.926
45	0.596	0.7468	0.8712	1.0181	1.1135	1.157	1.1358	1.0809	0.941	0.7818	0.653	0.5897	0.8904
50	0.53	0.6959	0.8284	0.9871	1.0909	1.1383	1.1153	1.0538	0.9013	0.733	0.5932	0.5247	0.8493
55	0.4612	0.6415	0.7804	0.9498	1.0614	1.1123	1.0877	1.0197	0.8554	0.6801	0.5303	0.4572	0.8031
60	0.3901	0.5839	0.7279	0.9065	1.025	1.0791	1.0532	0.9787	0.8038	0.6237	0.465	0.3878	0.7521
65	0.3173	0.5236	0.671	0.8575	0.9822	1.0391	1.0119	0.9313	0.7469	0.5641	0.3975	0.3169	0.6966
70	0.2434	0.4611	0.6104	0.8033	0.9331	0.9925	0.9644	0.8778	0.6851	0.5017	0.3286	0.2452	0.6372
75	0.1759	0.3968	0.5463	0.7441	0.8783	0.9398	0.9108	0.8186	0.6188	0.4371	0.2587	0.2257	0.5792
80	0.1716	0.3312	0.4794	0.6805	0.8182	0.8812	0.8517	0.7541	0.5486	0.3707	0.2148	0.2174	0.5266
85	0.1672	0.2647	0.4101	0.6129	0.753	0.8328	0.7873	0.6848	0.4751	0.3031	0.2063	0.209	0.4755
90	0.1627	0.2272	0.339	0.542	0.6933	0.7636	0.731	0.6113	0.3987	0.2347	0.1978	0.2005	0.4251



Tabla 38: Azimut de 175°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9689	0.9857	1.0035	1.0223	1.0335	1.0385	1.036	1.031	1.0146	0.9908	0.9749	0.9669	1.0056
10	0.9406	0.9744	1.0091	1.0463	1.069	1.0792	1.0741	1.0636	1.0304	0.9845	0.9528	0.9369	1.0134
15	0.9064	0.9575	1.0082	1.0635	1.0977	1.1132	1.1054	1.089	1.0392	0.9721	0.9249	0.9013	1.0149
20	0.8665	0.935	1.001	1.0738	1.1193	1.1399	1.1296	1.1071	1.0408	0.954	0.8915	0.8603	1.0099
25	0.8213	0.9071	0.9875	1.0771	1.1337	1.1594	1.1466	1.1177	1.0353	0.9301	0.8528	0.8144	0.9986
30	0.771	0.8741	0.9677	1.0735	1.1407	1.1713	1.1562	1.1208	1.0227	0.9008	0.8092	0.7637	0.981
35	0.7161	0.8361	0.9418	1.0629	1.1404	1.1757	1.1583	1.1163	1.003	0.8661	0.7609	0.7088	0.9572
40	0.6571	0.7935	0.9101	1.0454	1.1327	1.1725	1.153	1.1042	0.9765	0.8264	0.7083	0.65	0.9275
45	0.5942	0.7465	0.8726	1.0212	1.1177	1.1616	1.1402	1.0847	0.9433	0.782	0.6518	0.5877	0.892
50	0.5281	0.6957	0.8299	0.9904	1.0954	1.1433	1.1201	1.058	0.9037	0.7332	0.5919	0.5226	0.851
55	0.4591	0.6412	0.7821	0.9533	1.0661	1.1176	1.0928	1.0241	0.858	0.6804	0.5289	0.455	0.8049
60	0.388	0.5836	0.7296	0.9102	1.03	1.0848	1.0585	0.9834	0.8066	0.624	0.4635	0.3854	0.754
65	0.3151	0.5233	0.6728	0.8614	0.9874	1.0451	1.0175	0.9362	0.7497	0.5644	0.396	0.3144	0.6986
70	0.241	0.4608	0.6122	0.8072	0.9386	0.9987	0.9702	0.8828	0.688	0.502	0.327	0.2426	0.6393
75	0.1759	0.3964	0.5482	0.7481	0.884	0.9462	0.9169	0.8237	0.6217	0.4374	0.257	0.2257	0.5818
80	0.1716	0.3308	0.4814	0.6845	0.824	0.8878	0.8579	0.7594	0.5515	0.371	0.2148	0.2174	0.5294
85	0.1672	0.2644	0.4121	0.617	0.759	0.8396	0.8067	0.6902	0.4779	0.3034	0.2063	0.209	0.4794
90	0.1627	0.2272	0.341	0.546	0.6994	0.7704	0.7374	0.6168	0.4015	0.235	0.1978	0.2005	0.428

Tabla 39: Azimut de 180°

β°	01	02	03	04	05	06	07	08	09	10	11	12	Anual
0	0.9911	0.9912	0.9915	0.9919	0.9915	0.9911	0.9913	0.9916	0.9918	0.9912	0.9911	0.9911	0.9914
5	0.9689	0.9857	1.0035	1.0225	1.0337	1.0386	1.0362	1.0312	1.0147	0.9908	0.9748	0.9668	1.0056
10	0.9405	0.9744	1.0092	1.0465	1.0694	1.0796	1.0745	1.0639	1.0306	0.9845	0.9527	0.9367	1.0135
15	0.9062	0.9575	1.0084	1.0638	1.0982	1.1137	1.106	1.0895	1.0395	0.9722	0.9248	0.901	1.0151
20	0.8662	0.935	1.0013	1.0743	1.12	1.1407	1.1304	1.1077	1.0412	0.954	0.8913	0.86	1.0102
25	0.8209	0.9071	0.9878	1.0777	1.1345	1.1603	1.1475	1.1185	1.0358	0.9302	0.8526	0.814	0.9989
30	0.7706	0.874	0.968	1.0742	1.1417	1.1724	1.1572	1.1217	1.0232	0.9008	0.8089	0.7632	0.9813
35	0.7157	0.836	0.9422	1.0637	1.1415	1.1769	1.1595	1.1173	1.0036	0.8662	0.7605	0.7082	0.9576
40	0.6565	0.7934	0.9105	1.0463	1.1339	1.1739	1.1543	1.1054	0.9772	0.8265	0.7079	0.6494	0.9279
45	0.5936	0.7465	0.8731	1.0222	1.119	1.1632	1.1416	1.086	0.9441	0.7821	0.6514	0.5871	0.8925
50	0.5274	0.6956	0.8304	0.9915	1.0969	1.145	1.1216	1.0594	0.9045	0.7333	0.5914	0.5219	0.8516
55	0.4585	0.6411	0.7826	0.9545	1.0677	1.1194	1.0945	1.0256	0.8589	0.6805	0.5284	0.4542	0.8055
60	0.3872	0.5835	0.7301	0.9114	1.0317	1.0867	1.0603	0.985	0.8075	0.6241	0.463	0.3846	0.7546
65	0.3143	0.5232	0.6734	0.8626	0.9892	1.047	1.0194	0.9378	0.7507	0.5645	0.3955	0.3136	0.6993
70	0.2402	0.4607	0.6128	0.8085	0.9404	1.0008	0.9722	0.8845	0.6889	0.5021	0.3264	0.2417	0.6399
75	0.1759	0.3963	0.5489	0.7494	0.8859	0.9483	0.9189	0.8255	0.6227	0.4375	0.2565	0.2257	0.5826
80	0.1716	0.3307	0.482	0.6859	0.8259	0.8901	0.86	0.7611	0.5525	0.3712	0.2148	0.2174	0.5303
85	0.1672	0.2643	0.4128	0.6184	0.7611	0.8419	0.8088	0.692	0.4789	0.3035	0.2063	0.209	0.4803
90	0.1627	0.2272	0.3417	0.5474	0.7014	0.7727	0.7395	0.6187	0.4024	0.2351	0.1978	0.2005	0.4289